OREGON DEPARTMENT OF TRANSPORTATION

TRANSIT DEVELOPMENT PLAN GUIDEBOOK

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Cover Image: Corvallis, OR (Corvallis Transit System)

CONTENTS

Medford, OR (Rogue Valley Transportation District)

Springfield

INTRODUCTION

PURPOSE OF GUIDEBOOK

This guidebook was prepared to support Oregon's transit providers in preparing TDPs. TDPs express transit provider goals and identify needs and strategies to achieve them over a 20-year horizon or specified time frame. A TDP is also an opportunity to inform and help integrate transit needs into Transportation System Plan (TSP) updates and other planning processes. This guidebook provides best practices and recommendations for preparing TDPs.

This guidebook's content is based on lessons learned and best practices derived from the experiences of Oregon transit providers. It also draws on the policies, procedures, and experiences of transit providers and other transportation agencies nationwide. The guidance is intended to be flexible rather than prescriptive (subject to applicable legislation and rules) and can be scaled to different sizes and types of transit systems. Different transit systems may have dissimilar needs and goals, and their resources available to support TDP development may also vary.

TDPs help transit providers identify their needs and make informed decisions to address them.

TDPs promote transparent and accountable decision-making.

TDPs in Oregon are sometimes called Transit Master Plans.

Klamath Falls, OR (Klamath Basin Senior Citizens' Center Public Transportation Services)

WHY DEVELOP A TDP?

A TDP CAN...

- **Define** transit's role in the community

- Help transit providers and their partners **comply with the Transportation Planning Rule** (OAR 660, Division 12) and other legal requirements

- Support transit providers in **strategically planning for service and capital investments** that meet provider and community goals

- **Strengthen coordination between transit providers and their partners** and among multiple planning processes

- Provide an opportunity to **evaluate the impacts of growth and land use changes** on the transit system

- Create an opportunity to **explore alternative futures**

- Increase the ability of transit providers and communities to **obtain funding and public support** for needed transit and intermodal improvements

AUDIENCE FOR THIS GUIDEBOOK

This guidebook is intended to benefit transit provider staff from multiple departments, Oregon Department of Transportation (ODOT) staff, local government staff and decision-makers, regional agency staff and decision-makers, and members of the community who are invested in the success of the transit system.
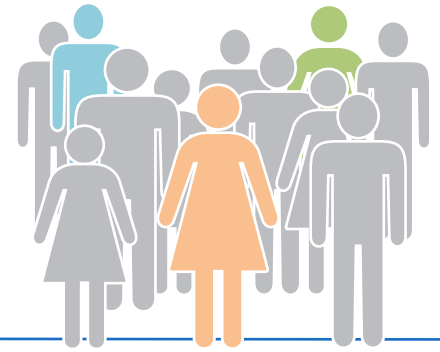
WHAT SHOULD A TDP DO?

A TDP SHOULD:

- Identify and prioritize public transit investments
- Assess the potential for transit (and investments in transit) to support a range of community and regional goals (e.g., promoting economic development and tourism)
- Establish a goal-based framework for identifying transit needs and improvement options
- Objectively and transparently explore alternatives for addressing transit needs
- Identify opportunities to improve connectivity between transit stops, other transportation modes, multiple transit providers, and riders' origins and destinations (local and regional)
- Be linked to performance measures and targets
- Include a financially constrained plan for transit improvements
- Provide the basis for the transit element of the community's TSP

WHAT ELSE COULD A TDP DO?

A TDP COULD:

- Provide an opportunity for a detailed visioning and goal-setting effort
- Provide an opportunity to develop a full performance measurement program
- Include the development of transit design standards
- Occur in conjunction with a detailed comprehensive operations assessment
- Support development of a federally-required Title VI Program
- Support the development of a federally-required Transit Asset Management Plan
- Include the development of transit-supportive amendments to local land development codes and comprehensive plans
- Include planning for supportive networks such as a park-and-ride program, Transportation Options program, or transportation demand management program
- Include a review of the transit provider's governance and/or administrative structure

WHAT ARE THE TYPICAL COMPONENTS OF A TDP?

- ✓ **Background information about the transit system and provider**
- ✓ **Assessment of relevant local, regional, and statewide plans and programs**
- ✓ **Transit provider's vision and goals**
- ✓ **Public involvement plan**
- ✓ **Partner agency involvement plan**
- ✓ **Existing conditions assessment**
- ✓ **Services and infrastructure needs identification, which may take the form of a set of alternatives**
- ✓ **Future funding scenarios**
- ✓ **Ridership forecasts**
- ✓ **Financial plan**
- ✓ **Implementation plan**

WHO PREPARES A TDP?

Transit providers of all types and sizes can benefit from preparing a TDP. The TDP can be prepared or updated by in-house staff, or with the support of consultants. A regional planning agency, in cooperation with local transit providers, can also lead the development of a TDP.

WHO APPROVES A TDP?

The transit provider's board should formally adopt the TDP. Formal adoption signals to the community and the provider's partners a strong commitment to the TDP's outcomes. Formal adoption may also strengthen a provider's competitiveness for grants or other new funding sources.

HOW DOES A TDP RELATE TO OTHER PLANS?

A TDP both influences and is influenced by other plans and planning processes in the region, whether the other plans are completed efforts or are ongoing. While a TDP could be developed independently, the data sets and analyses prepared for a TDP, a TSP, and other related plans are resources that should be shared between planning efforts. Sharing promotes consistency between the TDP and the other plans, reduces duplication of effort, and may reduce the cost of preparing the TDP.

Local And Regional Plans

Local and regional plans and planning processes with which a TDP should coordinate include, but are not limited to, the following:

- Regional and Local Transportation System Plans (TSPs)
- Coordinated Public Transit Human Services Transportation Plan (Coordinated Plan)
- Local government comprehensive plans (multiple elements)
- Local government land development codes (including development review processes)
- Local government visioning exercises
- Master plans for activity centers and large developments in the service area

Figure 1-1 on the following page shows a hypothetical transit provider service area and the various local and regional plans that might need to be coordinated with the TDP.

FIGURE 1-1 – EXAMPLE TDP STUDY AREA AND PLAN COORDINATION NEEDS

CITY

County #1
- TSP
- CTP

Transit Line

Region:
- TSP
- TDP
- Coordinated Plan

Region Boundary

Activity Center Master Plan

CITY

- Vision
- Comprehensive Plan
- TSP
- Land Development Code

County #2
- TSP
- CTP
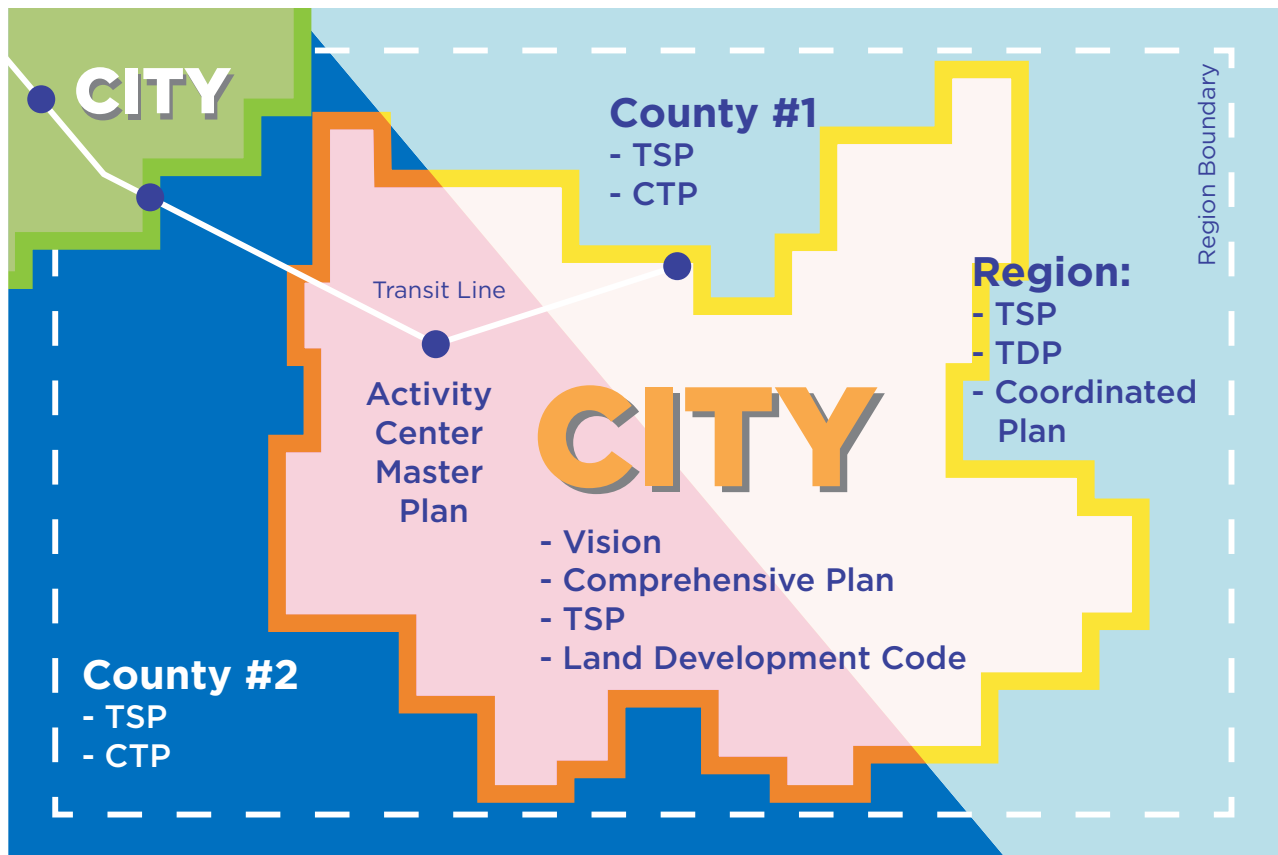
FIGURE 1-2 – CONNECTED PLANS & PLANNING PROCESSES

Corridor Plans + Bike & Pedestrian Plans + Safety Plans

TSPs regional & local

Downtown Plans + Master Plans + Parking Plans + Recreation Plans

TDPs & Coordinated Plans regional & local

Development Codes + Comprehensive, Economic & Housing Plans
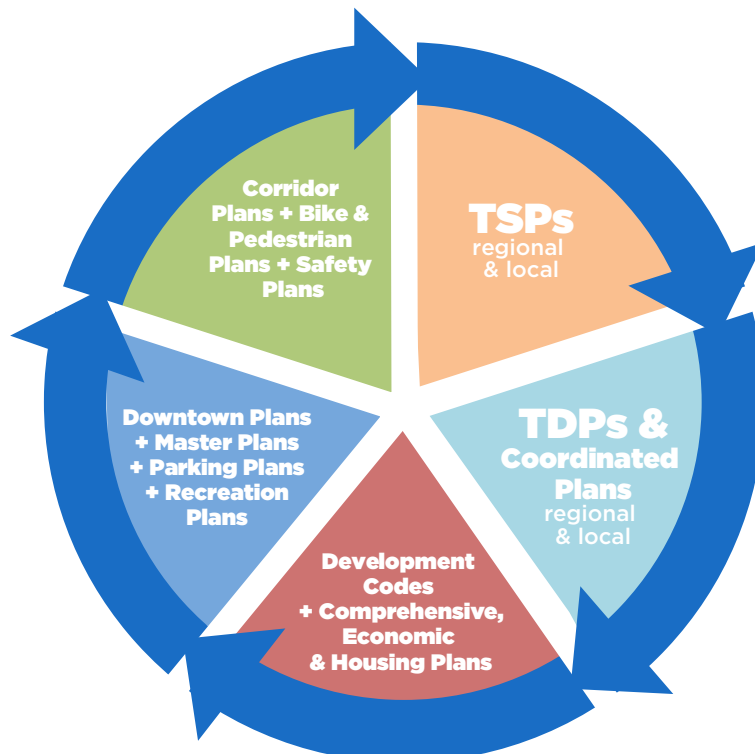
As shown in **Figure 1-2** on the following page, all of these plans are connected with respect to the following:

GEOGRAPHY. Regional and local plans, such as the TDP, help inform smaller-scale plans, such as downtown or activity center plans.

MOBILITY OPTIONS. Transit riders typically use other travel modes (particularly walking) at one or both ends of their trip.
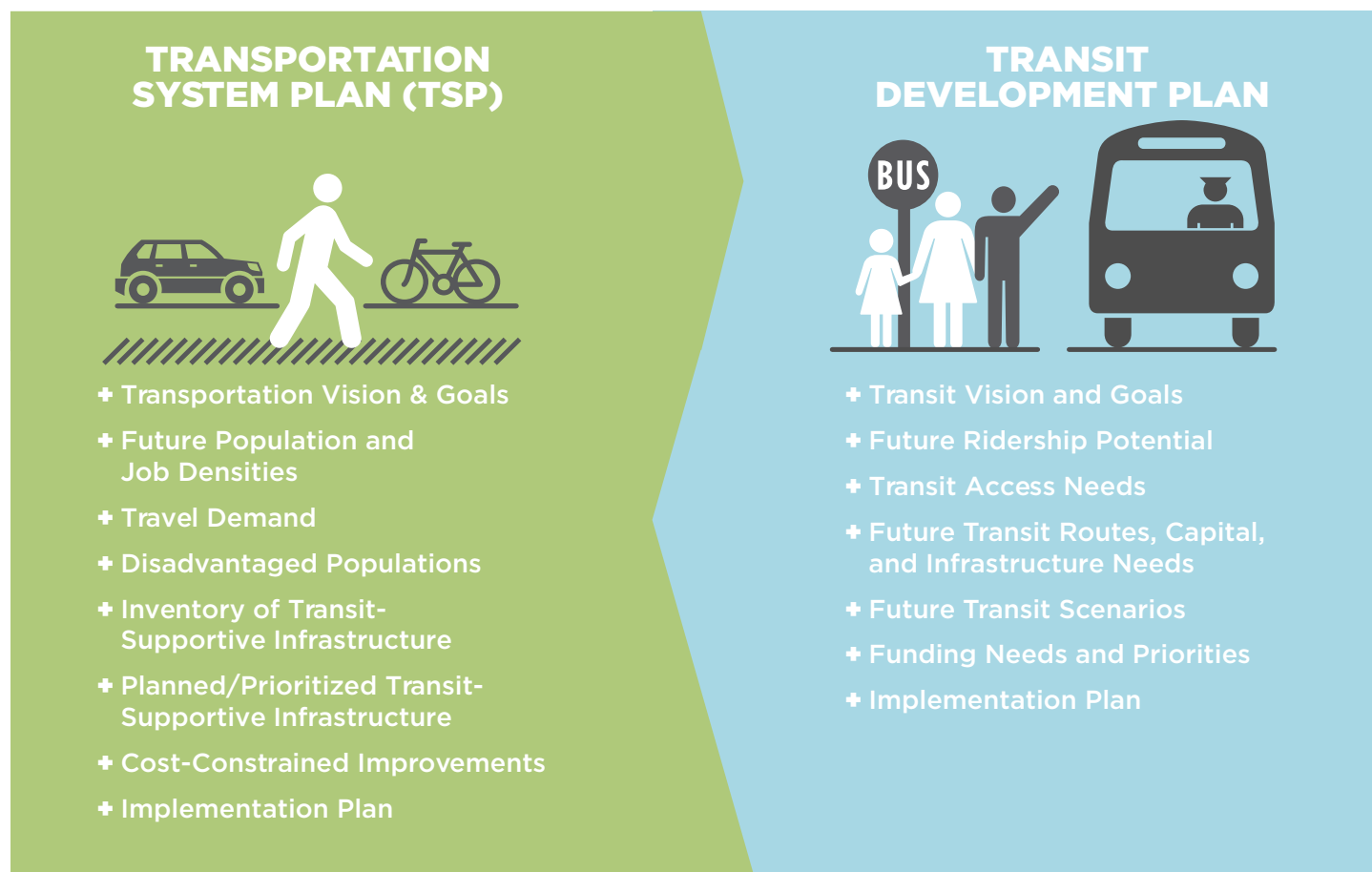
IMPLEMENTATION. Transit providers need the participation of other agencies in making transit service as effective as possible; likewise, those agencies need to work with the transit provider in planning and serving the community's mobility needs.

It is particularly important for the TDP to coordinate with local and regional TSPs, as the TSPs present the region's overall transportation vision and include actions local governments can take to support transit service (e.g., prioritizing pedestrian access improvements to bus stops). Likewise, the TDP provides a detailed plan for transit service that can be integrated into the TSP as its public transit element. **Figure 1-3** below compares typical topics covered in TSPs and TDPs.

> **While TSPs and TDPs can be prepared independently, it can be advantageous to coordinate them.**

FIGURE 1-3 – TDP AND TSP RELATIONSHIP

TRANSPORTATION SYSTEM PLAN (TSP)

+ Transportation Vision & Goals
+ Future Population and Job Densities
+ Travel Demand
+ Disadvantaged Populations
+ Inventory of Transit-Supportive Infrastructure
+ Planned/Prioritized Transit-Supportive Infrastructure
+ Cost-Constrained Improvements
+ Implementation Plan

TRANSIT DEVELOPMENT PLAN

BUS

+ Transit Vision and Goals
+ Future Ridership Potential
+ Transit Access Needs
+ Future Transit Routes, Capital, and Infrastructure Needs
+ Future Transit Scenarios
+ Funding Needs and Priorities
+ Implementation Plan

As shown in **Figure 1-4** below, TSPs and local comprehensive plans typically address 20-year or longer time frames, while TDPs focus on shorter-term needs and long-term vision. The TDP's long-term service vision is important to integrate into these other plans, as discussed on the next page.
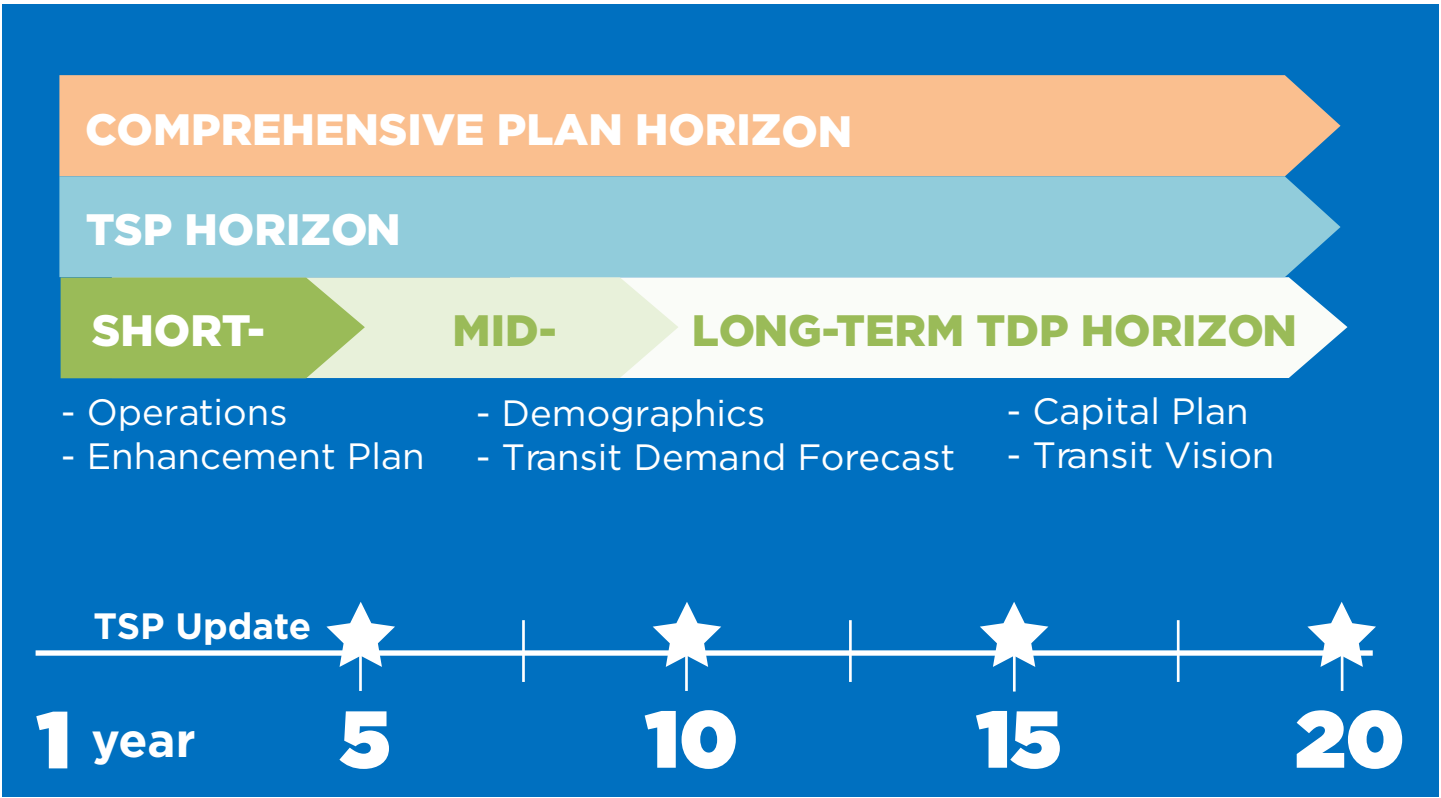
Oregon Public Transportation Plan (OPTP)

TDPs should also further the goals of the OPTP. The State is increasing its encouragement of transit investment planning and may move toward requiring transit providers to prepare a TDP. Accordingly, providers may need to show that their projects are furthering the OPTP's goals.

OPTP GOALS

✓ **Mobility (Public Transportation User Experience)**

✓ **Accessibility and Connectivity (Getting from Here to There)**

✓ **Community Livability and Economic Vitality**

✓ **Equity**

✓ **Health**

✓ **Safety and Security**

✓ **Environmental Sustainability**

✓ **Land Use**

✓ **Strategic Investment**

✓ **Communication, Collaboration, and Coordination**

As of August 2017

FIGURE 1-4 – EXAMPLE TDP TIMELINE AND PLAN COORDINATION NEEDS

COMPREHENSIVE PLAN HORIZON

TSP HORIZON

SHORT-   MID-   LONG-TERM TDP HORIZON

- Operations
- Enhancement Plan

- Demographics
- Transit Demand Forecast

- Capital Plan
- Transit Vision

TSP Update

1 year   5   10   15   20

APPLICABLE LEGISLATION & RULES

Transportation Planning Rule (TPR)

The TPR (OAR 660, Section 12) establishes requirements for TSPs. It allows for an applicable plan (such as a TDP) to be incorporated by reference (in whole or in part) into a TSP. At the same time, a TDP must be consistent with and adequate to implement a TSP, as required by OAR 660-012-0015(6), which states that "mass transit... districts shall participate in the development of TSPs for those transportation facilities and services they provide."

A TDP can serve as the public transportation plan element of a TSP if the plans have consistent horizons and the TDP is adequate to address TPR requirements. A TDP can also include more detailed analysis of near- and mid-term conditions and needs.

OAR 660-0012-0020(2)(c) requires TSPs to include a public transportation plan that:

1. Describes public transportation services for the transportation disadvantaged and identifies service inadequacies

2. Describes intercity bus and passenger rail service and identifies the location of terminals

3. For areas within [an Urban Growth Boundary] which have public transit service, identifies existing and planned transit trunk routes, exclusive transit ways, terminals and major transfer stations, major transit stops, and park-and-ride stations

4. For areas within an urban area containing a population greater than 25,000 persons [and] not currently served by transit, evaluates the feasibility of developing a public transit system at buildout

Statewide Transportation Improvement Fund (STIF)

The Statewide Transportation Improvement Fund (STIF), passed into law in 2017, established a new dedicated source of funding for improving public transportation statewide. Funds will be collected through a payroll tax and 90 percent of STIF funds will be distributed to "qualified entities" through a formula. Qualified entities include mass transit districts, transportation districts, counties without a mass transit district or transportation district, and federally-recognized Indian tribes.

Applicants must prepare a plan for improving service that has been reviewed by a local advisory committee and is approved by the Oregon Transportation Commission. Applicants may apply alone or in collaboration with two or more other qualified entities. STIF funds may be distributed for any public transportation improvement projects that:

- Coordinate transit providers to reduce fragmentation in the provision of transportation services

- Increase bus frequency in communities with a high percentage of low-income households

- Expand bus routes and bus service to reach communities with a high percentage of low-income households

- Improve frequency and reliability of connections between communities inside and outside the qualified entity's service area

- Implement programs to reduce fares in communities with a high percentage of low-income households

- Procure buses that are powered by natural gas or electricity for use in areas with populations of 200,000 or more

A TDP can help a transit provider qualify for a distribution from the Statewide Transportation Improvement Fund.

Eugene, OR (Lane Transit District)

Rulemaking will take place in 2018 and funds are expected to be available after July 1, 2019. Providers should verify current STIF plan requirements on ODOT's STIF website prior to developing a TDP scope of work.

> **A TDP can help a transit provider qualify for a distribution from the Statewide Transportation Improvement Fund.**

ORGANIZATION OF THIS GUIDEBOOK

The chapters in this guidebook are ordered sequentially to follow the order in which tasks could be completed when preparing a TDP. The chapters are as follows:

1. Introduction
2. Getting Started on a TDP
3. TDP Context
4. Stakeholder Involvement
5. Vision and Goals
6. Baseline Conditions
7. Needs Assessment
8. Alternatives Development and Evaluation
9. Financial Assessment
10. Implementation
11. Documentation
12. Other Components

Appendix A: Definitions & Acronyms

Appendix B: Transit Planning Concepts Primer

Appendix C: Example TDP Outline

Appendix D: Examples

Chapters 1, 2, 11, and 12 pertain to the scoping and general production of a TDP. Chapters 3 through 10 pertain to typical TDP tasks. These chapters include descriptions and guidance. Resources for more detailed information are provided throughout this guidebook where applicable.

The appendices provide selected supplemental information for the overall guide and for individual chapters. **Appendix A** is a list of definitions and acronyms. **Appendix B** is a primer on transit planning concepts. **Appendix C** is an example TDP outline that could serve as a starting point in scoping a TDP effort. **Appendix D** contains examples of TDP scopes, methodologies, surveys, and graphics.

Corvallis, OR (Corvallis Transit System)
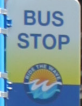
GETTING STARTED

MANAGING EXPECTATIONS

A TDP should be visionary but pragmatic. It should produce strategies and recommendations that move the transit provider toward its goals while being sensitive to what is achievable given its mission, market, and structure. A TDP allows a provider to answer the question "What if?" as to what it might do if more resources become available or if current resources are reduced. Assumptions about the source and magnitude of those resources, however, must be realistic. **Figure 2-1** illustrates the kinds of transit services that different types of communities might be able to support.

Table 2-1 provides example transit-supportive density thresholds. These can be used during project scoping to identify the range of transit solutions the TDP could consider. They can also be used in discussions with agency and public stakeholders about the range of potentially suitable transit and future land use and development scenarios that would make investments in different types of transit service cost-effective.

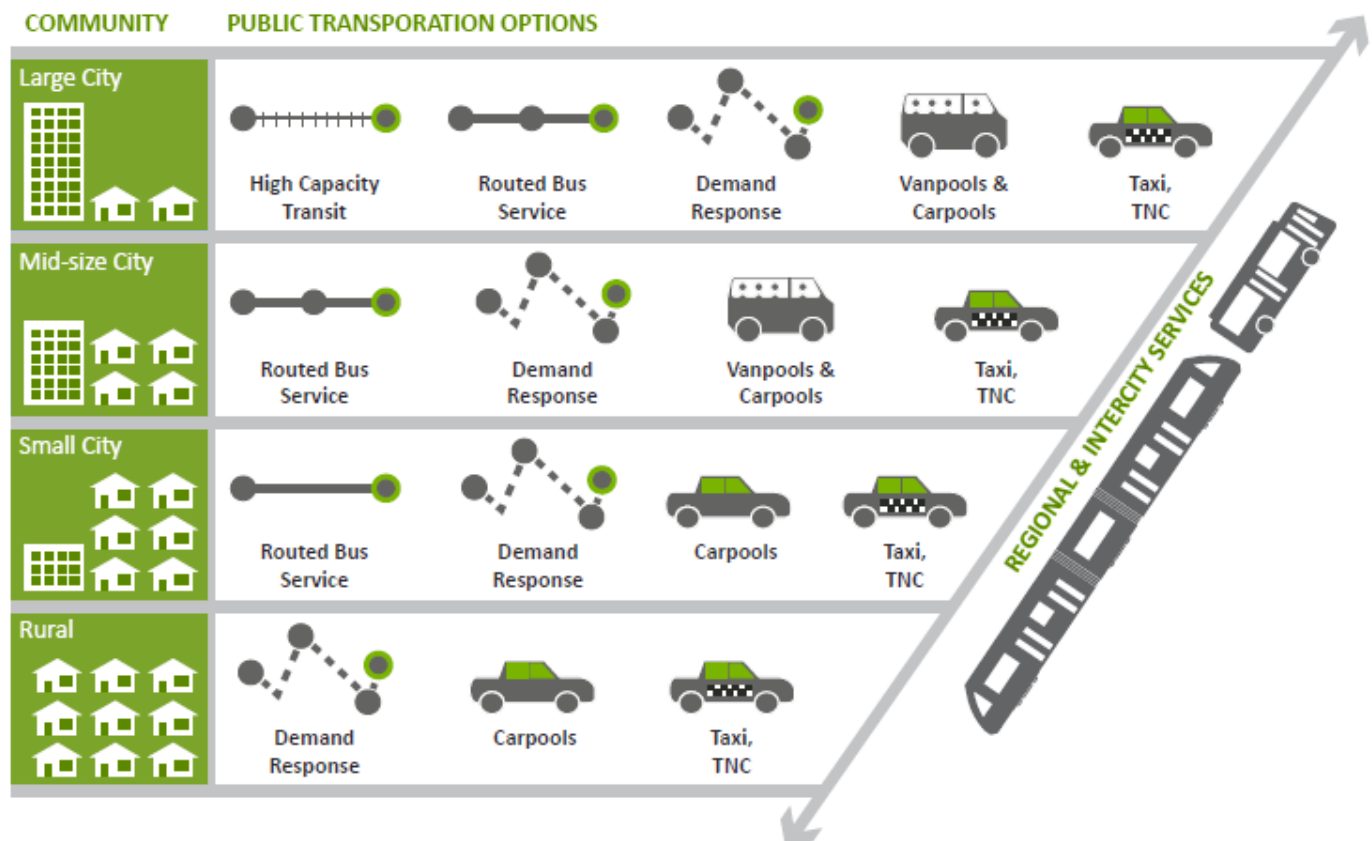## FIGURE 2-1 – TRANSIT SERVICES IN CONTEXT (ILLUSTRATIVE)

Note: In this figure, TNC = transportation network company.

TABLE 2-1 – ILLUSTRATIVE TRANSIT-SUPPORTIVE DENSITIES

LEVEL OF TRANSIT SERVICE SUPPORTED	MINIMUM DENSITY/INTENSITY	OTHER REQUIREMENTS
Demand-responsive	4.0 households/gross acre in service area	This type of service is in addition to ADA paratransit service within 3/4 mile of fixed-route transit service
Route deviation or other hybrid fixed-route/demand-responsive	2.5 households/gross acre in service area	
Local bus, 60-minute peak headway	3.0 households/gross acre within walking distance	
Local bus, 20- to 30-minute peak headway	4.5 households/gross acre within walking distance	
Local bus, 10- to 15-minute peak headway*	10.0 households/gross acre within walking distance	
Commuter bus*	2.0 households/gross acre over 20 square mile catchment area **OR** 8.0 households/gross acre over 2 square mile catchment area **PLUS** Employment anchor with 40.0 jobs/gross acre**	Large employment anchor (e.g., a downtown with 20 million square feet of non-residential uses)
Streetcar/light rail*	6.0 households/gross acre in corridor of 25-100 square miles **OR** 8.0 households/gross acre within walking distance **PLUS** Employment anchor with 40.0 jobs/gross acre**	Large employment anchor (e.g., a downtown with 20 million square feet of non-residential uses and existing rail corridor)
Commuter rail	1.5 households/gross acre over 20 square mile catchment area **OR** 8.0 households/gross acre within walking distance **PLUS** Employment anchor with 40.0 jobs/gross acre**	Large employment anchor (e.g., a downtown with 25 million square feet of nonresidential uses)

*May apply to bus rapid transit (BRT), depending on features
**Based on Pushkarev and Zupan anchor size guidelines and assuming 450 square feet per employee and 0.50 floor area ratio

Klamath Falls, OR (Quail Trail Public Transit)

Notes:

1. Household and job densities can be depicted using Census data and Geographic Information System (GIS) software.

2. The thresholds in this table are illustrative. Adjusted thresholds and/or additional factors may be appropriate in a given service area.

3. Industry rules-of-thumb for maximum walking distance to local bus and rail/BRT are 1/4 mile and 1/2 mile, respectively, but actual maximum walking distances vary based on the quality of the walking route and the presence or absence of competing routes.

4. Households/gross acre can be converted to persons/gross acre using household size data from the Census or local sources.

5. Thresholds and requirements were synthesized from:

   Public Transportation and Land Use Policy (Pushkarev and Zupan, 1977)

   The New Transit Town: Best Practices in Transit-Oriented Development (Dittmar and Ohland, eds., 2004)

02

SCOPING THE TDP EFFORT

ACHIEVING THE PURPOSE OF THE TDP

Clearly defining the TDP's purpose and desired outcomes is the first step in scoping a work effort that will use resources efficiently. Work tasks must be directed toward achieving the TDP's purpose and budgeted to allow for the appropriate level of effort. If funding is extremely limited, tasks must be prioritized and budgeted accordingly.

For example, say the primary desired outcome of the TDP is a clear picture of the current state of the transit system, and no significant change in available funding is expected in the next five to 10 years. In this case, more project resources might be directed to analyzing that one funding scenario rather than multiple alternative funding scenarios. Unmet needs should be identified for all funding scenarios.

TDP components such as stakeholder involvement, analysis of possible long-term future funding scenarios, and development of an implementation plan should not be cut. Rather, they should be prioritized and scaled in accordance with the purpose of the TDP and available resources.

Chapters 3 through 10 in this guidebook were developed to correlate to a recommended set of components for Oregon TDPs. The example TDP outline in Appendix C includes the same set of components.

COMPONENTS RECOMMENDED FOR INCLUSION IN OREGON TDPS:

✔	**Discussion of the context of the TDP [Ch. 3]**
✔	**Stakeholder involvement activities [Ch. 4]**
✔	**Review or development of transit vision and goals [Ch. 5]**
✔	**Evaluation of baseline conditions [Ch. 6]**
✔	**Needs assessment [Ch. 7]**
✔	**Alternatives development and evaluation [Ch. 8]**
✔	**Financial assessment [Ch. 9]**
✔	**Development of implementation plan [Ch. 10]**

Chapter 12 briefly discusses other activities that could be included in a TDP.

COORDINATION WITH OTHER PLANNING PROCESSES

Chapter 1 identified plans and planning processes with which TDPs should be coordinated and explains why this coordination is important. Specific points of coordination include planning horizons, project timelines, guiding principles, performance measures and targets, data sources, and stakeholder outreach.

One approach to coordinating transportation system plans (TSPs) and TDPs that has been used in Oregon involves completing most of the transit analysis needed for the TSP effort during the TDP effort. The TDP essentially functions as a chapter of the TSP and is completed within the timeline for TSP development. Under this arrangement, the TDP must look at a long-term horizon. The TDP may also look at shorter horizons in more detail.

CONSIDERATION OF RESOURCES

The resources that a transit provider needs to complete a TDP are funding, staffing, time, and data.

Oregon experience to date indicates that constraints on funding have prevented some providers from developing a TDP as comprehensive or detailed as they would have liked. This experience suggests that a transit provider scoping a TDP should be prepared to make choices about how much funding is allocated to specific work tasks. As noted earlier in this chapter, such choices should be made with the goals of the TDP in mind. Coordinating with other planning efforts may provide opportunities to reduce costs (e.g., by sharing data).

TDP FUNDING RESOURCES ALREADY AVAILABLE TO OREGON TRANSIT PROVIDERS

✓ **The provider's own funds**
✓ **Oregon Transportation and Growth Management (TGM) program grants**
✓ **Oregon Department of Transportation (ODOT) transit grants**
✓ **Statewide Transportation Improvement Fund distributions (STIF)**
✓ **Nontraditional grants from grantors with an interest in sustainability, public health, etc.**

With respect to staffing, the transit provider should assess what it can accomplish in house based on staff availability and skills. If the development of a TDP (or specific components) is outsourced to consultants, there will still be a need for significant staff support. The need for outsourcing to consultants might be reduced if the provider can partner with a university transportation program or can be assisted by community volunteers. Opportunities for the latter are noted in Chapter 4.

The transit provider should also assess what resources are available through ODOT and regional and local agencies. If TDP development occurs at the same time as a TSP update, for example, resources such as staff time may be shared between the two efforts.

TECHNICAL ASSISTANCE RESOURCES ALREADY AVAILABLE TO OREGON TRANSIT PROVIDERS

✓ **ODOT Region Transit Coordinators and Region Planning staff**
✓ **The statewide public transportation technical resource center to be established by ODOT using funds from the STIF**
✓ **The National Rural Transit Assistance Program administered by the Federal Transit Administration (FTA)**
✓ **University transportation programs**
✓ **The Rural Passenger Transportation Technical Assistance Program administered by the Community Transportation Association of America (CTAA)**
✓ **The Tribal Passenger Transportation Technical Assistance Program administered by CTAA**
✓ **Organizations such as the Urban Land Institute and the Center for Transit-Oriented Development (CTOD), which provide technical assistance for a fee**
The future statewide technical resource center will "assist public transportation service providers in rural areas with training, transportation planning, and information technology."

02

Eugene, OR (Lane Transit District)

LESSON LEARNED:

Data used to develop the TDP must be accurate, complete, and reliable. Addressing data errors after TDP development begins can have a significant negative effect on project schedule and budget. It may also adversely impact the credibility of the TDP's conclusions and recommendations.

With respect to time, the typical schedule for completing a TDP (including all the components listed in Chapter 1) is nine to 15 months. If the transit provider is seeking consultant assistance, additional time should be added to prepare procurement documents and select and contract with a consultant. Additional time might also be required when partnering with local agencies (e.g., for preparation of memoranda of agreement) or universities (e.g., for contracting).

With respect to data, the provider should ascertain what data it has in hand and what it might need to collect. The availability and reliability of data might influence the selection of performance measures and performance targets, as well as the comprehensiveness of any analyses supporting the TDP.

RELEVANT DATA RESOURCES AVAILABLE TO MOST OREGON TRANSIT PROVIDERS

- ✓ **US Census data, including American Community Survey data and Longitudinal Employer-Household Dynamics tools data**
- ✓ **National Transit Database data**
- ✓ **Existing and future land use plans (including existing and future land use types and densities)**
- ✓ **Data from recent transportation plans**
- ✓ **Remix (transit planning software for which ODOT has a license)**
- ✓ **Economic and demographic forecasts from the State Office of Economic Analysis**
- ✓ **Property information databases**
- ✓ **Housing and Transportation Affordability (H+T) Index data from the Center for Neighborhood Technology**

Appendix D includes example scopes of work, budgets, and timelines from TDPs completed in Oregon and elsewhere. It should be noted that the scopes of some of these TDPs were limited by resource constraints and the transit providers were not always able to include everything they wanted in their TDP. The Oregon examples in particular are snapshots; TDPs in Oregon will continue to evolve.

RESOURCES

Transit-oriented development-related resources

Author: CTOD

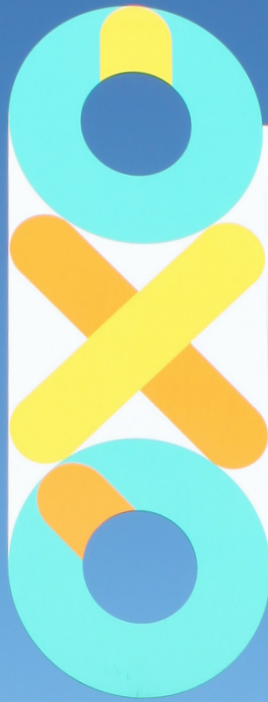Availability: http://ctod.org/

Published: Varies

CTOD provides several documents about transit-oriented development (TOD) that might inform alternative versions of Table 2-1 as well as provide relevant planning and policy guidance.

"Research and Technology Tools"

Author: ODOT

Availability: http://www.oregon.gov/ODOT/RPTD/Pages/Tools.aspx

Published: Unknown

Newport, OR (Lincoln County Transit)

TDP CONTEXT

WHY INCLUDE THIS IN A TDP?

"Context" in this chapter refers to the circumstances and environment where the transit system operates and plans to achieve its goals. It speaks to the reasons for developing the TDP, to factors that might influence the TDP's conclusions and recommendations, and to coordinating TDP development with other planning processes, as described in Chapter 1. The following elements should be included in the TDP Context chapter.

PURPOSE(S) OF THE TDP

The purpose (or purposes) of the TDP being developed should be stated clearly. It should be described with sufficient detail to accurately inform the analyses that will be conducted in later TDP tasks. Chapter 1 identifies several reasons why a TDP might be prepared or updated and what it should do; transit providers are not limited to the purposes listed in that chapter.

PROVIDER HISTORY

The TDP should provide a synopsis of how the provider became what it is today. This history helps the reader understand why the current system is set up as it is and provides context for potential changes.

PROVIDER FUNDING & GOVERNANCE

Include a description of the provider's organizational and funding structure so the reader can understand the opportunities, constraints, and potential need for changes in the future.

AGENCY PARTNERS

The provider's agency partners should be identified. This list should include other transit and transportation options providers that operate in or provide connections to the service area.

Medford, OR (Rogue Valley Transit District)

03

RELATED PLANS & PROGRAMS

Provide an overview of other plans and programs that might affect or be affected by the TDP.

Below is a list of questions that a provider might use to guide the review of relevant plans and programs.

PLAN AND PROGRAM REVIEW QUESTIONS

1. Are the goals of the plan consistent with the transit provider's goals and the TDP's purpose?

2. What is the time horizon of the plan?

3. What data were used to develop the plan? Do those data inform TDP analyses? Would having access to the sources of the data or more detailed data facilitate development of the TDP?

4. How does the plan incorporate transit? Does the plan identify any transit needs?

5. How does the plan address multimodal connectivity? Does the plan identify any needed connections to/from transit?

6. Does the plan discuss anticipated growth and changes in the transit service area? Does the plan discuss these topics with respect to transit-supportive land use patterns and transit-oriented development (TOD)?

7. Does the plan include planned and/or programmed transportation improvements that complement or conflict with transit?

8. Does the plan include policy or other recommendations that might influence how development of the TDP progresses?
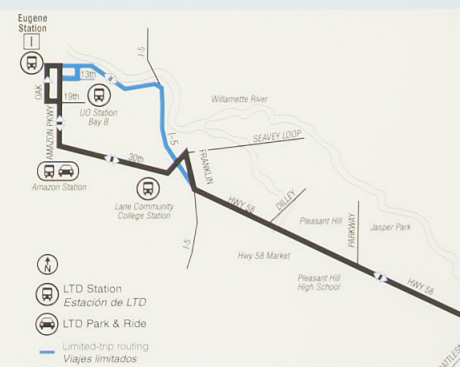
Eugene, OR (Lane Transit District)

B

28 Eugene Station

28 Eugene Station
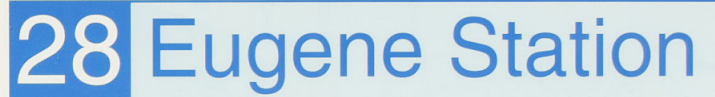
Mon. - Fri.		Saturday		Sunday	
AM	PM	AM	PM	AM	PM
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7:48	1:08	9:07	2:17	10:07	2:07
8:18	1:38	10:07	3:17	11:07	3:07
8:48	2:08	11:07	4:17		4:07
9:18	2:38		5:17		5:07
9:48	3:08		6:17		6:07
10:18	3:41		7:07		7:07
10:48	4:11		8:22		
11:18	4:38		9:22		
11:48	5:08				
	5:41				
	6:08				
	6:38				
	7:08				
	8:23				
	9:23				

LTD Station
Estación de LTD

92 Lowell

92 Lowell

Mon. - Fri.		Saturday		Sunday	
AM	PM	AM	PM	AM	PM
	5:20		NO SERVICE		NO SERVICE

LTD Station
Estación de LTD

LTD Park & Ride

Limited-trip routing
Viajes limitados

A typical TDP stakeholder involvement framework includes the elements identified in the TDP outline in **Appendix C**. The example TDP outline also identifies potential members of advisory committees and potential stakeholder interviewees.

Klamath Falls, OR

STAKEHOLDER INVOLVEMENT

WHY INCLUDE THIS IN A TDP?

Stakeholder involvement should start early in TDP development. Effective stakeholder involvement can provide information and insights that are enormously valuable in the TDP's analytical tasks. Early stakeholder involvement also builds partnerships that can make outreach activities more effective.

Stakeholder involvement activities can be divided into public involvement activities and agency involvement activities. "Agency" here refers to the transit provider's institutional and governmental partners. Organizations such as business associations are considered part of the "public."

STAKEHOLDER INVOLVEMENT FRAMEWORKS

Stakeholder involvement frameworks are engagement plans for the public and for agency partners. They reflect the values and guiding principles of the transit provider (and the TDP) and describe the processes that are to be used to engage with stakeholders. A new framework could be developed specifically for preparation of a TDP, or an existing framework developed for a different plan or another agency could be adopted or adapted.

Public involvement plans must consider environmental justice principles and should include outreach to non-riders and potential new markets. Both public involvement plans and agency involvement plans should clearly link engagement activities to the appropriate TDP tasks to ensure that project assumptions and decisions are being validated at each step of the process, and that the input received is being used to inform subsequent phases of TDP development.

STRATEGIES

Table 4-1 identifies many potential stakeholder involvement strategy ideas and provides rough estimates of implementation costs. The table is not intended to be a comprehensive summary of stakeholder involvement techniques. More information about these techniques and others is available through the list of resources at the end of this chapter.

A TYPICAL TDP STAKEHOLDER INVOLVEMENT FRAMEWORK INCLUDES THE FOLLOWING ELEMENTS:

- **Advisory Committee(s)** that may include both agency and public stakeholders. One combined advisory committee may be used, or there may be separate technical (agency) and public committees. These committees should meet at each project milestone that requires review, feedback, or direction.
- **Surveys** of riders, drivers, and potential riders (online, in-person, or mail/insert)
- **Stakeholder interviews**
- **Outreach events** such as project information tables at popular gathering places such as the library, transit center, cultural center, or grocery store
- **Design charrettes** with the advisory committee(s) and other stakeholders
- **Work sessions** with the transit provider's board or the body that will ultimately adopt the TDP.
- **Project web site**
- **Open houses and/or virtual open houses** may be useful in some cases. For example, they can be effective in small cities where the transit service area coincides with the city limits. An open house may also be a necessary or customary step for the transit provider prior to an adoption hearing.

TABLE 4-1 – STAKEHOLDER INVOLVEMENT STRATEGIES

METHOD	DESCRIPTION	REPRESENTATIVE COST*
Advisory committees	Citizen committees are also known as citizen advisory committees or public advisory committees. Citizen committees can help make important decisions, bring expertise and resources needed to address problems, and provide a valuable link to other stakeholders.	High
Community fairs	A community fair is an event intended to provide project information and raise awareness about project issues.	Medium to High
Design charrettes	A design charrette is a transparent, hands-on workshop that brings people from different disciplines and backgrounds together to develop and explore design options for a particular project.	Medium to high
Displays and exhibits	Displays and exhibits are set up in public areas to convey project information and raise awareness about particular issues. Displays can be interactive and can include feedback opportunities. Displays can be set up at community events. "Traveling" displays can be rotated among multiple locations to reduce the cost of producing display materials.	Low to High
Electronic surveys	Electronic surveys typically involve people using email or web sites to register their opinions on projects and issues. Findings can be reported as a measure of community attitudes and issues, increasing the chance that opinions will be taken into account in decision-making processes.	Medium to High
Field trips	Field trips are organized trips to specific locations or on specific transit services. They are venues for providing information and receiving participant input about the location or service.	Low to Medium
Focus groups	A focus group is a small group of individuals who have a common interest or characteristic and who are brought together by a moderator to discuss a particular issue. Focus groups are effectively interviews of a small group of stakeholders in lieu of a number of interviews with individual stakeholders.	Low
Information contacts	Information contacts are the official liaisons for the public and the media. They should be well-versed in project information.	Low
Information hotlines	An information hotline offers prerecorded information on a project via the telephone and/or access to project team staff members who can answer questions or provide additional information and assistance.	Medium
Information repositories	Information repositories are project files available in locations near the site or facility (usually in a public library, school, or local government office).	Medium to High

METHOD	DESCRIPTION	REPRESENTATIVE COST*
Inserts	An insert is a fact sheet that can be disseminated via a local periodical. They can be a paid advertising supplement or can be put together by news staff in the public interest.	Medium to High
Interactive video displays/ kiosks	Interactive video displays and kiosks offer menus for interaction. A large amount of information can be provided through a presentation that invites viewers to ask questions or direct the flow of information.	High
Kitchen table discussions	Kitchen table discussions are small, informal, and relaxed meetings within the neighborhood, usually at someone'`s home or a local coffee shop. Participants can talk, listen, and share ideas.	Low
Media releases	Media releases are official project information statements that are released to various media outlets.	Low
Open houses	Open houses provide information and opportunities for follow-up or feedback. They are relatively informal events designed to allow people to drop in and obtain information at their convenience. Open houses for different projects and efforts could be combined to increase average attendance.	Low to High
Photovoice	Photovoice is a process of collecting information and expressing issues and concerns through photographs.	Low to Medium
Poster competitions	Poster competitions can raise awareness of issues and generate ideas. Posters can be used to provide visual communication.	Low
Printed information	Printed material includes fact sheets, flyers, newsletters, brochures, issue papers, reports, and surveys. Printed material can be distributed by hand, made available for the public to pick up, or mailed out.	Medium to High
Public involvement volunteers	Public involvement volunteers are people from the community who are temporarily enlisted to assist in developing and implementing a public involvement program. These volunteers could hand out brochures, undertake a telephone survey, etc.	Low
Public meetings	A public meeting focuses on a particular topic or issue and is generally led by a facilitator. The public's suggestions and concerns voiced at the meeting are recorded. Public meetings can be large meetings; smaller focus group meetings can be used to engage people who may not feel confident speaking up in a larger gathering.	Low to Medium
Questionnaires	Questionnaires collect information by presenting questions to individuals via interviews, survey forms handed out at events, mail-outs, email, or online interfaces.	Low

METHOD	DESCRIPTION	REPRESENTATIVE COST*
Shop fronts	Shop fronts (or site offices) bring a participatory venue into a heavily used public area such as a shopping center. They are designed to allow people to drop in at their convenience to obtain project information, ask questions, and provide input. They differ from open houses in that they are set up in locations where the public already is.	Medium
Sketch interviews	A sketch interview is a visualization technique that encourages the articulation of ideas through drawings and sketches.	Low
Speakouts	A speakout (or soapbox) is an event wherein a group of people give testimony about a particular issue. The speakers can be experts or members of the public.	Low to Medium
Stakeholder interviews	Interviewing stakeholders is a simple but very effective mechanism for gaining an understanding of a community issue and for identifying relevant needs.	Medium
Submissions	Submissions are intended to allow participants to respond to proposals or ideas in some detail. They are used widely to allow interested parties to make detailed responses to development proposals. They can be used in a broader context to allow community members to have their say or present their ideas in written detail.	Low to High
Surveys	A survey collects information from a specific population about a specific issue using questionnaires, which could be delivered face-to-face or via written forms, phone surveys, electronic surveys, or on-line surveys. Compared to questionnaires (above), surveys tend to be larger in scale and seek input that can be generalized to the full population in a statistically sound way.	Low to High
Web sites	A web site can contain project information such as announcements and project documents.	Medium to High
Workshops	A workshop is a structured meeting involving a smaller number of participants. Participants work together in a group (or multiple groups) to solve a common problem or task, with the assistance of a facilitator.	Low to High

Costs (in terms of time, staffing, and materials) can vary widely. Choose and design strategies carefully.

Source: Adapted from Sustainable Management Approaches and Revitalization Tools - Electronic (SMARTe) Community Involvement Techniques

BEST PRACTICES

Below are several best practices for engaging stakeholders. These can help identify which strategies from Table 4.1 may be most effective for you and how to deploy them effectively.

Ensure participants understand their role in the process.

All meetings and outreach events should include questions for participants that will inform the process. Examples include: What is the most important thing you think the plan should accomplish? What transportation needs do you see in the community that we haven't identified? What ideas do you have for enhancing the transit network?

Ask advisory committee members and interviewed stakeholders what public outreach methods have worked best for their constituents and communities.

Understanding what has worked best in the past can improve the effectiveness of the outreach effort.

Go to your audience instead of expecting your audience to come to you.

Approaches to public meetings that maximize the accessibility of the meetings for stakeholders also maximize the usefulness of the meetings.

Engage community organizations proactively.

Established community organizations may be willing to actively assist your public outreach efforts by providing meeting space, providing volunteers, including project information in their mail-outs and newsletters, etc.

Conduct pilot tests.

Conduct a pilot test before initiating an on-board or online survey. Are respondents in the pilot test able to complete the survey in a reasonable amount of time? Are any questions proving to be unclear or misleading? Are all of the data points needed for subsequent analysis being obtained?

04

RESOURCES

Public Involvement Techniques for Transportation Decisionmaking

Author: Federal Highway Administration (FHWA)

Availability: http://www.fhwa.dot.gov/planning/public_involvement/publications/pi_techniques/fhwahep15044.pdf.

Published: 2015

Resource Guide on Public Engagement

Author: National Coalition for Dialogue & Deliberation

Availability: www.ncdd.org/files/NCDD2010_Resource_Guide.pdf

Published: 2010

"18F Accessibility Guide"

Author: 18F

Availability: https://accessibility.18f.gov/

Published: Unknown

18F is an office within the US General Services Administration. The Guide provides links to guidance for improving the accessibility of electronic documents and web sites..

"How to Make Presentations Accessible to All"

Author: World Wide Web Consortium (W3C)

Availability: https://www.w3.org/WAI/training/accessible

Published: Updated 2012

"Environmental Justice Policy Guidance for Federal Transit Administration [FTA] Recipients" (FTA Circular, 4703.1)

Author: FTA

Availability: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_EJ_Circular_7.14-12_FINAL.pdf

Published: 2012

This guidance distinguishes environmental justice analyses from Title VI requirements.

State of the Practice Reports

Author: International Association for Public Participation

Availability: http://www.iap2.org/?page=369

Published: 2007-2016

Public Involvement Toolkit

Author: City of Portland

Availability: https://www.portlandonline.com/shared/cfm/image.cfm?id=137141

Published: 2006

"Community Involvement Techniques"

Author: US Environmental Protection Agency (EPA), German Federal Ministry of Education and Research, and Interstate Technology Regulatory Council ("Sustainable Management Approaches and Revitalization Tools - Electronic" Decision Support System)

Availability: http://www.smarte.org/smarte/tools/PublicParticipation/methodologies.xml?layout=barebones

Published: 2010

"Tools and Practices for Land Use Integration: Public Involvement"

Author: FHWA

Availability: https://www.fhwa.dot.gov/planning/processes/land_use/land_use_tools/page05.cfm

Published: N/A

Superfund Community Involvement Toolkit

Author: US EPA

Availability: https://www.epa.gov/superfund/community-involvement-tools-and-resources#files

Published: 1996-2016

This source is targeted toward EPA policies but could be adapted as needed.

VISION AND GOALS

VISIONING & GOAL-SETTING

The transit provider's vision is a statement about the future of transit in the community. The vision statement typically expresses the provider's values and mission and identifies strategies for carrying out the mission. These strategies can take the form of specific short- and/or long-term goals. The vision might also identify priorities, opportunities, and constraints.

A comprehensive visioning and goal-setting effort can be conducted prior to or as an early task in the TDP work effort. Such an effort typically requires public engagement and will likely make use of many of the stakeholder engagement strategies in Chapter 4. Chapter 12 discusses this and other efforts that can be undertaken in conjunction with TDP development if the provider so desires.

WHY INCLUDE THIS IN A TDP?

Transit providers should review and, if needed, update their vision and goals as part of TDP preparation. The provider's vision and goals should be used to inform the TDP's assessment of baseline transit conditions (Chapter 6). The vision and goals should also be used to define future analysis scenarios and to assist in identifying, developing, and prioritizing improvements.

Providers should review their vision and goals early in the TDP process. The vision and goals will inform many TDP tasks.

TDP scopes of work sometimes include reviewing and updating goals and objectives as a later task in the process. While a provider can opt to do this, waiting until later in the process risks minimizing the importance of the vision and goals in driving performance assessment.

PERFORMANCE MEASUREMENT

Performance measurement helps transit providers monitor the extent to which transit services are embodying their vision and achieving their goals. It is also a valuable tool for ongoing monitoring and management of all aspects of service delivery, ensuring accountability, and providing support for decision-making.

Needs assessment in the TDP should be realistic but visionary.

A **performance measure** is an indicator of how a particular aspect of transit service is being provided. A **performance target** is a numeric threshold that defines whether or not that aspect of transit service is being provided at the desired level. Targets can be established based on goals, current performance, industry standards, and/or peer data.

A transit provider can and should consider available and anticipated funding sources when establishing performance targets. Funding constraints may force providers to choose between frequency and service coverage, between a focus on regional or local service, or between conditions that are optimal for riders and those that are optimal for providers (e.g., desirable passenger loads).

At the same time, the targets must represent what the community wants the transit system to become. Performance targets inform needs assessment in the TDP, and needs assessment should be visionary as well as realistic.

EXAMPLE PERFORMANCE MEASURE

On-time performance (a measure of reliability)
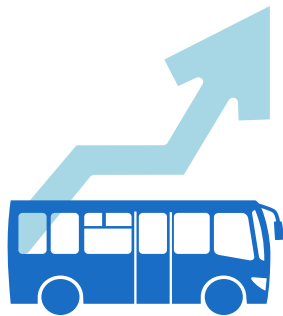
EXAMPLE PERFORMANCE TARGET

≥90% of buses depart bus stops no more than 1 minute early or 5 minutes late

SELECTING PERFORMANCE MEASURES AND TARGETS FOR THE TDP

Performance measures and targets used in the TDP to evaluate the transit system and its components should be closely linked to the provider's goals. If, for example, providing transit service more effectively is a provider goal, then transit services should be evaluated using measures that explicitly define effectiveness (e.g., boardings per revenue hour).

CATEGORIES OF PERFORMANCE MEASURES:

1. Availability
2. Service delivery
3. Community
4. Travel time
5. Safety and security
6. Maintenance and construction
7. Economic
8. Capacity
9. Paratransit
10. Comfort

To be reliable and credible, performance measures must be objective and rely on high-quality data.

The Transit Cooperative Research Program (TCRP) published TCRP Report 88, which identifies and provides detailed summaries for over 400 transit performance measures that providers could consider using. A series of question-and-answer menus helps providers quickly identify measures that relate to their goals and objectives.

TCRP
REPORT 88

TRANSIT COOPERATIVE RESEARCH PROGRAM

Sponsored by the Federal Transit Administration

A Guidebook for Developing a Transit Performance-Measurement System

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES
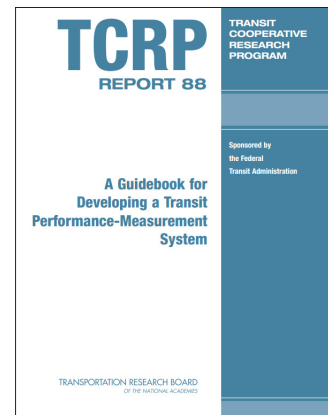
The example TDP outline in **Appendix C** includes a recommended core set of performance measures. The measures in this set address multiple facets of transit service and provider operations, are useful in statewide assessment and monitoring, use data that transit providers already report to the National Transit Database, and represent best practices as described in TCRP Report 88.

Performance measures must reflect multiple aspects of transit performance, but the number of measures used should not be overwhelmingly high. The example TDP outline in Appendix C includes a core set of performance measures.

If a transit provider has a performance measurement program in place, the measures used in the TDP should be consistent with those used in the performance measurement program.

PERFORMANCE MEASUREMENT PROGRAM

A **performance measurement program** is more than an adopted set of performance measures and targets. It includes processes for selecting, calculating, evaluating, and refining those measures and targets. Most importantly, it includes processes for communicating performance results to internal and external stakeholders and for incorporating the results into transit provider decision-making, with the ultimate objective of continuously improving performance.

If desired, a provider can develop a performance measurement program in conjunction with TDP development, as noted in Chapter 12.

USES OF A TRANSIT PERFORMANCE MEASUREMENT PROGRAM:

- ✔ **Monitoring transit service**
- ✔ **Improving transit performance**
- ✔ **Transit provider management (contracted services)**
- ✔ **Developing and updating service design standards**
- ✔ **Supporting transit investments**
- ✔ **Communicating regularly with decision-makers, partners, and the public**

RESOURCES

A Guidebook for Developing a Transit Performance-Measurement System (TCRP Report 88)

Author: TCRP

Availability: http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_report_88/Guidebook.pdf

Published: 2003

A Methodology for Performance Measurement and Peer Comparison in the Public Transportation Industry (TCRP Report 141)

Author: TCRP

Availability: https://www.nap.edu/read/14402/chapter/1

Published: 2010

Oregon Public Transportation Plan

Author: Oregon Department of Transportation

Availability: http://www.oregon.gov/ODOT/Planning/Pages/OPTP.aspx

Published: Expected 2018

BASELINE CONDITIONS

WHY INCLUDE BASELINE CONDITIONS IN A TDP?

A TDP should include a snapshot of the current transit system and current trends. This snapshot defines the existing state of the transit system and serves as a baseline against which needs and improvement alternatives can be identified and evaluated.

ANALYSES

This section describes several types of analyses and inventories that are recommended for inclusion in the baseline conditions evaluation. Analysis results should be presented using maps and tables whenever possible.

Resources are available to assist smaller providers in conducting analyses for their TDPs.

DEMOGRAPHICS

The TDP should include a summary of relevant existing and forecast demographic data. These data might include the following:

- Population or household densities
- Job densities
- Densities of specific communities that are traditionally more likely to be transit-dependent
  › Low-income households
  › Seniors and youth
  › Communities of color
  › Disabled individuals
- Locations of communities that predominantly speak a language other than English at home

Figure 6-1 shows an example of a map comparing the locations of existing bus routes to areas of high population density. **Figure 6-2** is an example of mapping areas with high concentrations of low-income households.

Mapping the locations and densities of specific communities in the service area can help transit providers consider environmental justice in decision-making.

Demographic data provide information about factors that contribute to transit ridership as well as information that can be used to assess whether or not appropriate levels of transit service are being provided. Relevant data are typically available from the US Census but might also be available from local surveys. (As noted in Chapter 2, American Community Survey data and Longitudinal Employment-Household Dynamics tools may be useful.) If a local TSP was completed recently or is under development, its demographic data can be used in the TDP. Another potential source of demographic data is the Human Services Transportation Plan (Coordinated Plan), if appropriate for the planning area.

FIGURE 6-1 – MAP OF POPULATION DENSITY (WITH TRANSIT ROUTES) [EXAMPLE]
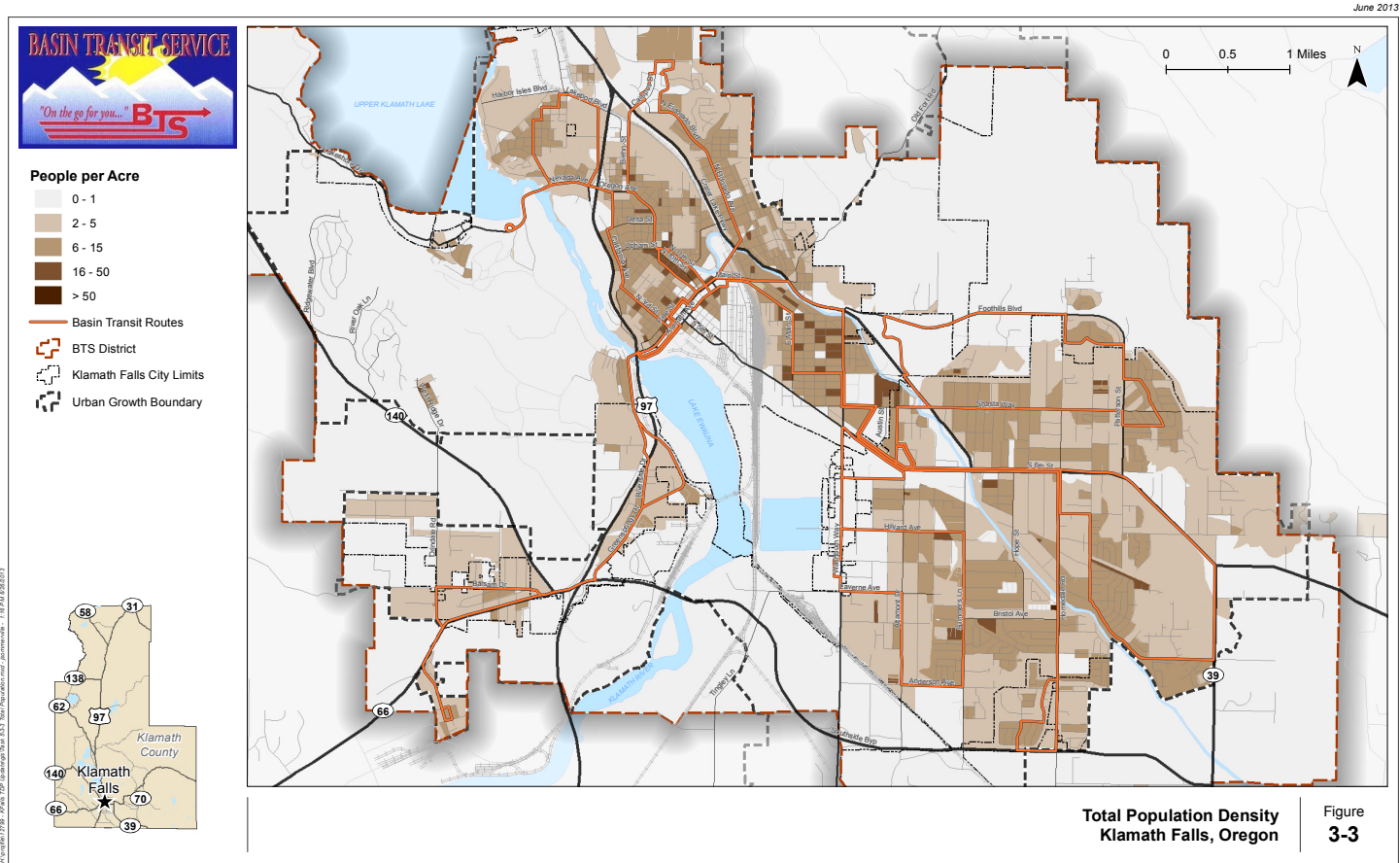
Source: Basin Transit Service TDP (June 2013)

FIGURE 6-2 – MAP OF LOW-INCOME POPULATION DENSITY [EXAMPLE]

Source: Existing Conditions for Regional Transit, Salem-Keizer Transit (September 2015)
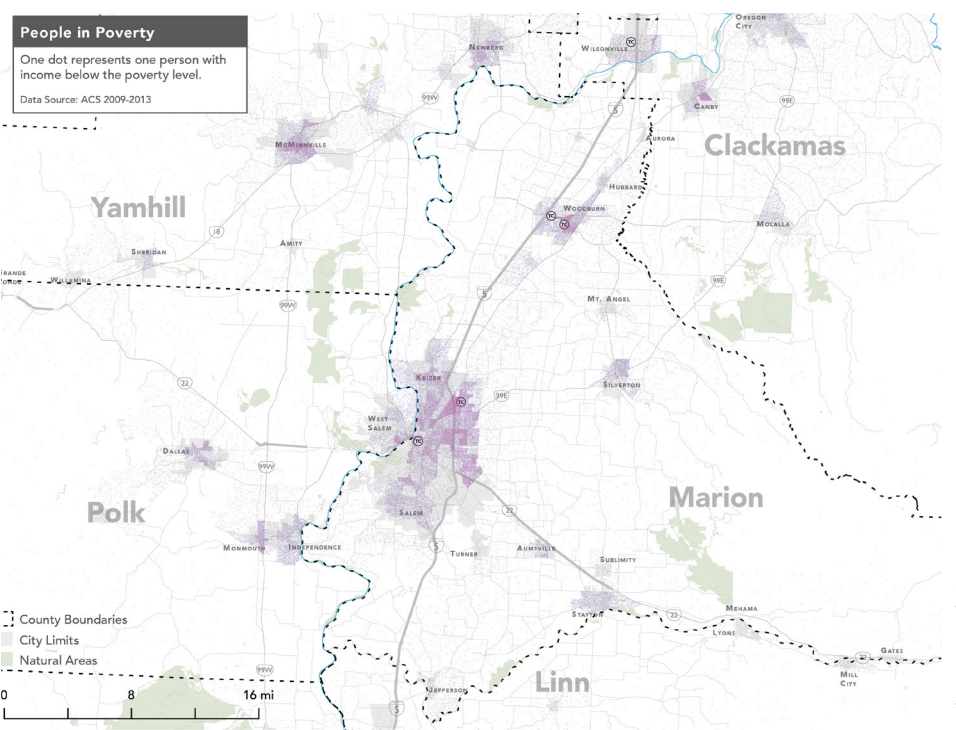
LAND USE & DEVELOPMENT

The TDP should summarize information about land use and development patterns in the service area. Such information can be used to identify areas with service expansion potential (where "potential" is indicated by higher allowed densities or a mix of residential and non-residential uses) and areas where transit investments and land use planning may need to be better coordinated. Such information might include the following:

- Existing and future land use designations (which represent desired conditions) and allowed densities

- Actual (built) land uses and densities

- Location of existing and emerging activity centers that could generate or attract a significant number of transit trips

The above-listed information could be obtained from the local comprehensive plan, zoning data, and/or the property appraiser. A recently completed or ongoing TSP or coordinated plan may already contain this information.

Figure 6-3 presents an example map from a TDP showing where schools, recreation facilities, hospitals, and concentrations of retail businesses are located relative to existing transit service, along with the locations of transportation facilities such as transit centers and the local airport.

FIGURE 6-3 – MAP OF ACTIVITY CENTERS (WITH TRANSIT ROUTES) [EXAMPLE]

Source: Basin Transit Service TDP (June 2013)

06
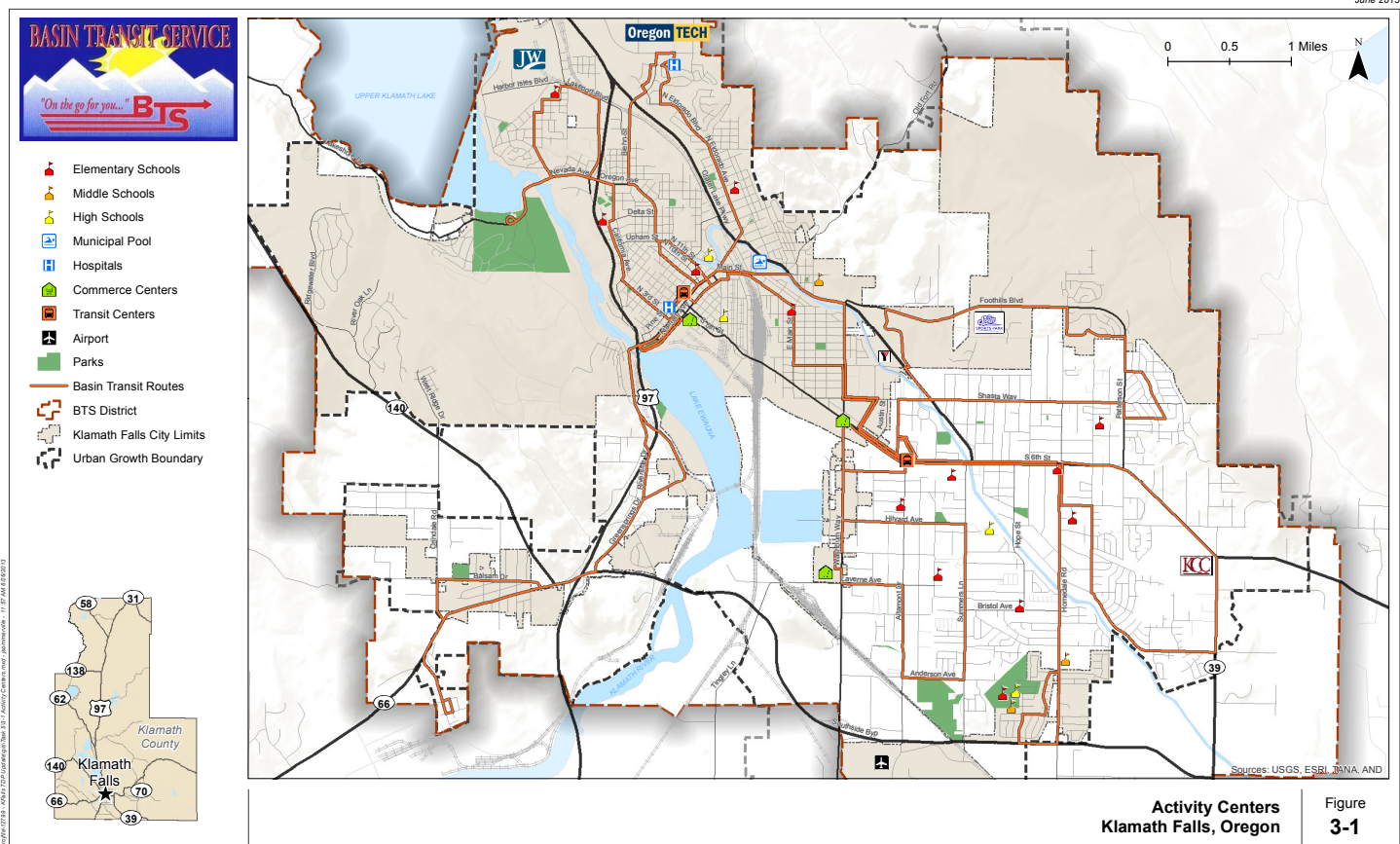
TRANSIT SERVICES PROVIDED

The TDP should inventory and map the transit services that are currently provided. The inventory can include service characteristics as well as performance statistics that are generally descriptive of the services. Route-level information is appropriate. Significant seasonal variations in service levels and performance should be noted.

Example route- or service-level descriptors are headways, hours of service, number of boardings, operating cost per boarding, operating cost per hour, on-time performance, and vehicle crowding at the peak load point (which might be reported by time of day and day of week or reported only for selected time periods), as illustrated in **Figure 6-4** and **Figure 6-5**. Different descriptors may be appropriate for different transit services, different sizes of transit systems, and different operating environments (e.g., urban vs. rural). Many of these descriptors are suitable for trend analysis and peer comparison, which are described later in this chapter.

FIGURE 6-4 – TRANSIT ROUTE CHARACTERISTICS TABLE [EXAMPLE]

Route Number	Route Name	Boardings per Month	Hours of Service per Month	Productivity (Boardings per Hour)
1X	Wilsonville/Salem	3,150	143	22.0
40	Polk County	2,577	192	13.4
50	Dallas/Salem	1,742	157	11.1
30	Canyon Connector	1,625	194	8.4
10	Woodburn/Salem	1,461	178	8.2
20	Silverton/Salem	1,390	187	7.4
2X	Grand Ronde/Salem	2,035	286	7.1
45	Polk County Flex	2,285	341	6.7
35	Canyon Flex	117	75	1.6
25	North Marion Flex	148	152	1.0

Source: Existing Conditions for Regional Transit, Salem-Keizer Transit (September 2015)

FLEET

The TDP should inventory the current fleet. This inventory should summarize characteristics and performance statistics that are generally descriptive of the fleet. Candidate descriptors include vehicle types, vehicle sizes (e.g., length and passenger capacity), useful life, average vehicle age, vehicle peak capacity, fuel type, and vehicle maintenance conditions. Load factor (i.e., vehicle crowding) could be discussed as part of the fleet inventory instead of the service inventory. **Figure 6-6** gives an example of a fleet inventory table.

FIGURE 6-6 – FLEET INVENTORY TABLE [EXAMPLE]

Vehicle Number	Make	Model	Year	Length
826-11	Dodge	G Caravan	2011	-
830-10	Dodge	G Caravan	2010	-
823-09	Ford	E-450	2009	-
827-08	Chevy	Uplander	2008	-
824-04	Chevy	Impala	2004	-
829-00	Buick	LeSabre	2000	-
828-98	Ford	E-S Duty	1998	-

Source: Albany Area Regional Transportation Plan, Technical Memorandum #5 (September 1, 2015)

TRANSIT INFRASTRUCTURE

The TDP should describe the transit infrastructure currently provided in the study area and its owners. This information can include a bus stop inventory (which identifies bus stops that are accessible and bus stops with amenities such as shelters), a park-and-ride lot inventory (which can include informal lots), descriptions of on-line and phone-based services for riders, descriptions of maintenance and administrative facilities, and descriptions of transit centers.

TDP fleet and infrastructure inventories can support federally required Transit Asset Management reporting.

FIGURE 6-5 – MAP OF TRANSIT SERVICE FREQUENCIES [EXAMPLE]
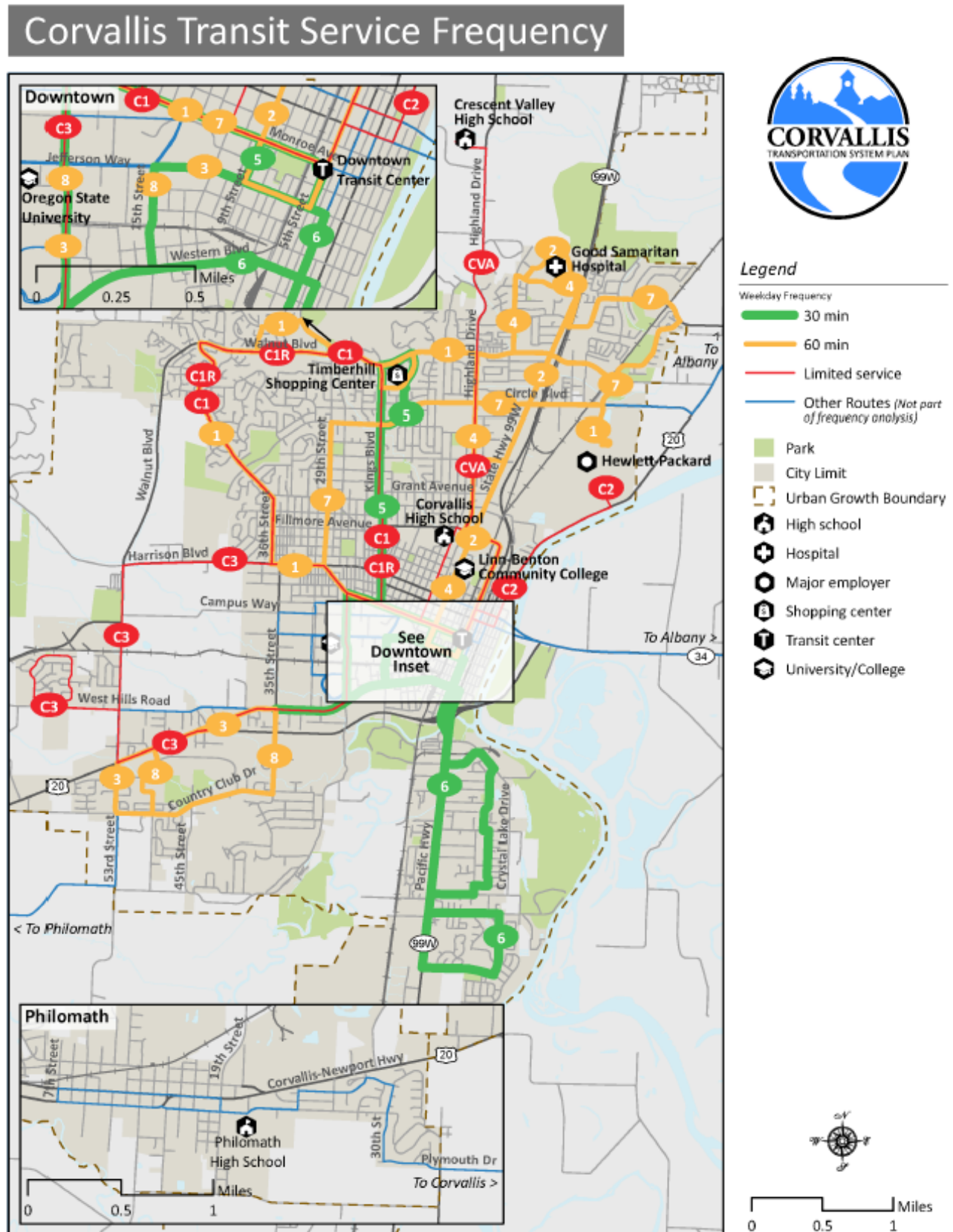
Source: Corvallis TSP Update and TDP, Technical Memorandum #8 (September 13, 2016)

OTHER TRANSIT PROVIDERS IN THE SERVICE AREA

The TDP should describe other public transportation services that operate in the service area or provide connections to and from the service area. These other services might include Amtrak, intercity bus, neighboring transit providers, non-profit social service transit providers, hospital shuttles, school buses, and private transit
services such as employee shuttles. The TDP should describe Interactions between the transit providers in the study area, including providers in neighboring jurisdictions and intercity transit like the POINT bus system.

also rely on quarterly, monthly, or weekly statistics.

Data for a trend analysis might be obtained directly from provider sources or, if limited to annual statistics, from the National Transit Database (NTD). It should be noted that the Rural NTD does not include as much data as the Urban NTD. Additionally, some useful measures, such as on-time performance, are not reported to the NTD.

BEST PRACTICE:

In a trend analysis, it is not enough to simply generate graphs. The trends evident in the graphs must be studied and synthesized. Why are the trends occurring? How is one graph related to another? What conclusions can be drawn from the graphs? It may be necessary to review the graphs with specific transit provider staff to figure out the answers to these questions.

Vanpool programs, bike-sharing programs, and transportation network companies (e.g., Uber, Lyft, and taxis) can also be included insofar as they complement transit service.

TRANSIT PERFORMANCE

The TDP should describe existing transit performance using a trend analysis and a peer analysis.

Trend Analysis

A trend analysis reports historical performance using, at a minimum, the performance measures identified in Chapter 5. Trend analyses typically take the form of graphs showing how aspects of transit performance have changed over the most recent five- to-10-year period, like the ridership trend graph in **Figure 6-7**. Trend analyses often use annual statistics but could

FIGURE 6-7 – TREND ANALYSIS GRAPH [EXAMPLE]
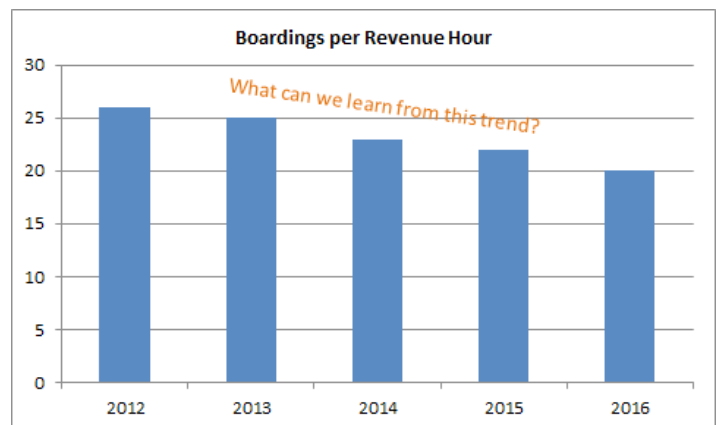
Peer Analysis

The TDP should include a peer analysis. A peer analysis compares transit provider performance to the performance of a select number of transit providers who operate in similar environments and/or with similar resources. Unlike a trend analysis, a peer analysis speaks to what the transit system might be capable of achieving, not just what it has achieved to date. An example peer analysis graph is provided in **Figure 6-8**.

FIGURE 6-8 – PEER ANALYSIS GRAPH [EXAMPLE]
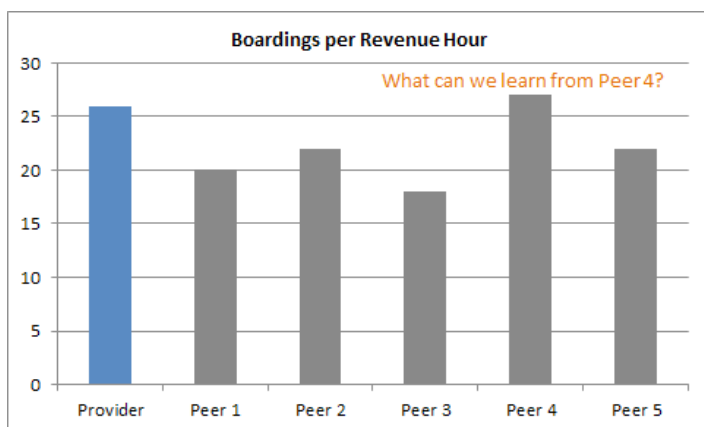
Peer analysis should include the performance measures identified in Chapter 5 to the extent possible. Separate peer analyses might be conducted for different transit services (e.g., for fixed-route bus and paratransit).

Peer analysis is a best practice. It is not a report card but an opportunity to learn and improve.

Transit Cooperate Research Program [TCRP] Report 141: *A Methodology for Performance Measurement and Peer Comparison in the Public Transportation Industry* describes the process of peer identification and provides a peer selection methodology. This peer selection methodology has been implemented in the Florida Transit Information System (FTIS) tool maintained by the Florida Department of Transportation

(FDOT). FTIS is an online tool that contains multiple years of Urban and Rural NTD data for all US transit systems. While FTIS was developed to assist Florida transit providers' transit planning activities, the tool is available to and usable by transit providers nationwide.

A peer analysis typically relies on NTD data and, thus, most often uses annual statistics. While the NTD uses standardized definitions of the performance measures it includes, it should be noted that peer providers do not always report performance exactly in accordance with these definitions.

To supplement a peer analysis, the provider might also conduct phone interviews of the peer providers, especially if there is a need to get more detailed information about administrative and governance matters or to get performance measures not available through the NTD.

OTHER ANALYSES

Chapter 9 of this guidebook discusses the development of the future funding scenarios to be evaluated in the TDP; however, providers could opt to develop future funding scenarios as part of the existing conditions assessment. Providers should be careful not to develop funding scenarios that overly restrict the needs assessment (Chapter 7). The needs assessment should be realistic but also visionary.

06

SOURCES OF PERFORMANCE DATA

✓	**National Transit Database (NTD)**
✓	**Florida Transit Information System (FTIS)**
✓	**Automated Vehicle Location (AVL) data**
✓	**Automatic Passenger Counter (APC) data (which might include on-time performance data, dwell time data, and wheelchair boarding rates)**
✓	**Electronic farebox data (which might be geocoded as well as time-stamped, and which would provide a breakdown of fare media used)**
✓	**Scheduling and dispatching software (which would be especially useful for paratransit if it records actual arrivals and departures as well as scheduled arrivals and departures)**
✓	**Operations and maintenance logs**
✓	**Ride-checks**

LESSON LEARNED:

It is very important to understand how information reported to the NTD is measured and calculated and how technologies such as AVL systems calculate the measures being reported.

LESSON LEARNED:

If AVL and APC systems are in place, providers should consider looking at raw data outputs and coordinating with vendors to develop customized reports.

RESOURCES

A Methodology for Performance Measurement and Peer Comparison in the Public Transportation Industry (TCRP Report 141)

Author: TCRP

Availability: http://www.trb.org/Publications/Blurbs/163872.aspx

Published: 2010

Florida Transit Information System

Host: FDOT

Availability: www.ftis.org

Published: Updated on an ongoing basis

Transit-related sustainability resources

Author: American Public Transportation Association

Availability: http://www.apta.com/resources/hottopics/sustainability/Pages/default.aspx

Includes Transit Emissions Quantifier Tool and associated User's Guide.

Published: Varies

Transit Network Analysis (TNA) Tool

Author: Oregon State University

Availability: http://tnasoftwaretool.engr.oregonstate.edu:8080 or ODOT Regional Transit Coordinators

Published: 2017

TNA is a web-based software tool that uses Google Transit Feed Specification and Census data to assist providers in visualizing, analyzing, and reporting transit network information in Oregon, including information relevant to Title VI analyses.

ODOT and OSU have also made code available for a GTFS extension called GTFS-ride at:

https://github.com/ODOT-PTS/GTFS-ride/blob/master/spec/en/reference.md

https://github.com/ODOT-PTS/transitfeed-ride

TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation

Author: FTA

Availability: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/regulations-and-guidance/asset-management/60361/tam-facility-performance-measure-reporting-guidebook.pdf

Published: 2017

Toledo, OR (Lincoln County Transit)

NEEDS ASSESSMENT

WHY INCLUDE THIS IN A TDP?

A needs assessment identifies potential improvements to address transit service, capital, and infrastructure needs, now and in the future. Needs assessment informs the selection of recommended improvements in Chapter 8.

WHAT IS NEEDS ASSESSMENT?

Needs assessment is a first-cut identification of transit needs that comes from three sources:

1. Application of performance measures and targets to existing conditions
2. Demand forecasts based on current demographic and land use trends
3. Stakeholder input

Needs assessment identifies where services and structures are adequate, meeting performance targets, and serving the provider's vision and goals. It also identifies where they are deficient. Needs assessment does not recommend or develop specific solutions to address deficiencies; that happens as alternatives are developed. (See Chapter 8.) Public input received by this point may include proposed solutions, however.

This chapter provides guidance for producing

An unconstrained list of needs is not a wish list. Though not constrained by cost, it should represent identified needs and a realistic vision for transit in the community.

an unconstrained list of needs (i.e., one not limited by funding or other resources). This unconstrained list should be a complete picture of the community's needs, allowing the provider

to assess multiple improvement scenarios and prioritize needs. The list of needs will be pared down later based on actual and anticipated funding constraints.

ANALYSIS COMPONENTS

1. APPLICATION OF PERFORMANCE MEASURES AND TARGETS TO EXISTING CONDITIONS

Needs assessment includes evaluating how well the transit system meets the provider's performance targets. If targets were established to measure the transit system's success in meeting provider and community goals (per Chapter 5) and performance has been measured (per Chapter 6), unmet targets indicate areas where improvements may be justified.

Chapter 7 (Needs Assessment) evaluates existing and recent performance as reported in Chapter 6 (Baseline Conditions) based on the performance targets in Chapter 5 (Vision and Goals).

Table 7-1 on the following page presents simplified example tables for summarizing various aspects of transit system performance.

TABLE 7-1 NEEDS ASSESSMENT SUMMARY TABLES [TEMPLATES]

TRANSIT SYSTEM COMPONENT	PERFORMANCE MEASURE 1		PERFORMANCE MEASURE 2		PERFORMANCE MEASURE 3		POTENTIAL IMPROVEMENTS
	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	
[Systemwide]							

TRANSIT SYSTEM COMPONENT	PERFORMANCE MEASURE 1		PERFORMANCE MEASURE 2		PERFORMANCE MEASURE 3		POTENTIAL IMPROVEMENTS
	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	
[All Routes]							
[Route]							
[Route]							
[Route]							

TRANSIT SYSTEM COMPONENT	PERFORMANCE MEASURE 1		PERFORMANCE MEASURE 2		PERFORMANCE MEASURE 3		POTENTIAL IMPROVEMENTS
	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	
[Paratransit]							

TRANSIT SYSTEM COMPONENT	PERFORMANCE MEASURE 1		PERFORMANCE MEASURE 2		PERFORMANCE MEASURE 3		POTENTIAL IMPROVEMENTS
	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	
[Vehicles]							

TRANSIT SYSTEM COMPONENT	PERFORMANCE MEASURE 1		PERFORMANCE MEASURE 2		PERFORMANCE MEASURE 3		POTENTIAL IMPROVEMENTS
	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	
[Infrastructure]							

Notes:

1. Performance measures are discussed in Chapter 5.

2. Multiple improvements that address conditions in which targets are not met can be listed under Potential Improvements. Improvement options will be evaluated later.

3. Infrastructure might include bus stops, park-and-ride lots, maintenance facilities, etc.

When evaluating performance, provider staff—particularly operations staff—should be consulted. If a performance target is not being met, it is important to identify the reasons why and potential actions the provider can take to improve. If a target is being met, the provider should consider whether it is feasible to raise the target and take steps to further improve performance. Cross-checking metrics (e.g., on-time performance vs. load factor) can also provide useful insights.

Don't let funding expectations shape needs identification.

Needs might be administrative.

2. BASELINE GROWTH IN DEMAND

Chapter 6 discussed demographic patterns and land use and development patterns. If current trends and patterns continue over the TDP planning horizon, will the transit system be adequate to support such a future? This future is referred to as the "future baseline transit demand scenario" in this guidebook. If the current transit system is not adequate to support this baseline, the shortfalls will signal potential improvement needs.

The future baseline transit demand scenario is based on demographic, land use, and development trends. It can be used to identify areas where current services and infrastructure are inadequate to serve forecast needs.

Several methodologies are available to estimate future baseline transit demand. These are described briefly in **Table 7-2** and in more detail in **Appendix B**. Some of the methodologies are very precise while others are not. Some require a low level of effort, and some require a high level of effort. Use of any of them in this phase of TDP development should be focused on identifying needs.

EXAMPLE

Performance Measure [Ch. 5]
Annual ridership per capita (a measure of mobility)

Performance Target [Ch. 5]
12.0 annual riders per capita based on service area population

Existing Performance [Ch. 6]
2016 annual riders per capita for an example transit system:

   Systemwide | 10.0 (target: 12.0)

Performance-Based Needs Assessment [Ch. 7]
Existing annual ridership per capita is not meeting the target. Thus, there is a need to consider strategies and investments to increase systemwide ridership.

What if annual ridership per capita increases after 2016 such that the 12.0 target is met in 2020, as shown in the trend graph below? Is it time to adjust the target?

Annual Ridership per Capita
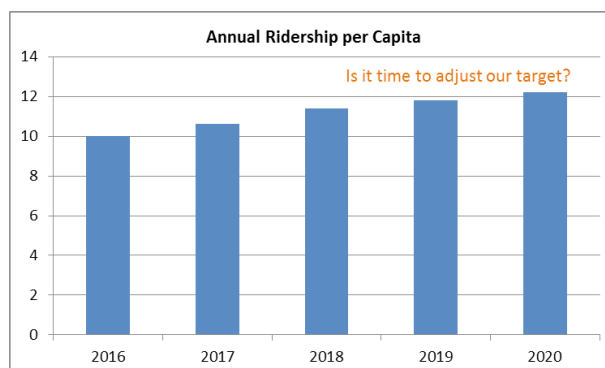
TABLE 7-2 – METHODOLOGIES FOR ESTIMATING FUTURE BASELINE TRANSIT NEEDS

METHODOLOGY	APPLICATION	DATA & RESOURCE NEEDS
Model Approach #1: Assume systemwide ridership per capita will remain constant as the service area population grows. Can the current system accommodate the projected increase in demand?	Systewide All areas	Low
Model Approach #2: Grow route-level ridership in proportion to population growth. Do individual routes have the capacity to accommodate future growth?	Fixed routes All areas	Medium
Transit Cooperative Research Program [TCRP] Report 161 Method: TCRP Report 161 provides methodologies for estimating transit need and demand in non-urban areas. Does transit service meet travel needs in rural and small urban areas?	Systemwide Small urban and rural areas	Low
TCRP J-11 Task 8 Method: TCRP J-11 Task 8 provides a methodology for forecasting trips occurring on paratransit modes, through volunteer driver programs, and on community bus service. Does transit meet the travel needs of seniors?	Systemwide Small urban and rural areas	Low
Transit-Supportive Area Analysis: Using Table 2-1 from this guidebook or similar data, assess the future transit-supportiveness of subareas within the region. Is minimum hourly fixed-route service provided to areas that can support it? Are there areas where a higher level of transit service is justified?	Subareas and corridors Large and small urban areas	Medium
Transit Planning Tools: Use the regional travel demand model or transit planning software tools such as TBEST, Remix, and STOPS to identify future needs. Can the current system accommodate future needs?	Geographic scale varies Large and small urban areas	High

3. STAKEHOLDER INPUT

Valuable input can be obtained through targeted survey questions and stakeholder interviews. See Chapter 4 for additional stakeholder involvement strategies and guidance.

Stakeholder involvement activities up to this point in TDP development are likely to have generated significant community input about transit needs, challenges, and opportunities (i.e., potential solutions). Stakeholders might identify essential destinations not currently served by transit, destinations that need longer service hours or schedule modifications (e.g., to meet employer/employee population needs or to improve transfers and reduce travel time), and specific locations where stop access is a challenge.

SUMMARIZE RESULTS

Summarize transit needs revealed by the performance evaluation, the future baseline transit demand assessment, and stakeholder input.

Needs assessment in the TDP should be realistic but visionary.

RESOURCES

"Transit Boardings Estimation and Simulation Tool" (TBEST)

Developer: FDOT

Availability: https://tbest.org/

Developed: Prior to 2008

Originally developed to support development ridership forecasts required of Florida transit agencies by FDOT. Can also be used for environmental justice analyses, scenario planning, and other transit planning efforts. Requires ArcGIS.

Remix

Developer: Remix

Availability: https://www.remix.com/

Developed: Unknown

Developed to assess travel time, cost, and demographic effects of transit system changes. Results can be shared with stakeholders and partners. As noted in Chapter 2, Remix is available to Oregon transit providers through ODOT.

"Simplified Trips-on-Project Software" (STOPS)"

Developer: FTA

Availability: https://www.transit.dot.gov/funding/grant-programs/capital-investments/overview-stops

Developed: 2013

Uses Census and General Transit Feed Specification data (among other data sources) to estimate ridership for fixed guideway transit services.

Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation: Final Workbook (TCRP Report 161)

Author: TCRP

Availability: http://www.trb.org/Main/Blurbs/168758.aspx

Published: 2013

An Excel spreadsheet is available at the above link, along with additional documentation about the development of the methodology.

Funding the Public Transportation Needs of an Aging Population (TCRP Project J-11 Task 8)

Author: Nelson\Nygaard Consulting Associates

Availability: http://www.apta.com/resources/reportsandpublications/Documents/TCRP_J11_Funding_Transit_Needs_of_Aging_Population.pdf

Published: March 2010

Klamath Falls, OR (Basin Transit)

ALTERNATIVES DEVELOPMENT AND EVALUATION

WHY INCLUDE THIS IN A TDP?

Alternatives development consists of selecting and packaging improvements to address specific transit service, capital, and infrastructure needs.

ANALYSIS APPROACH

This chapter takes the set of needs identified in Chapter 7 and identifies one or more potential solutions for each need. These could include but are not limited to service changes, infrastructure projects, and provider actions, all of which are generically referred to as "improvements"

in this chapter. Sufficient information about each improvement is then developed for use in estimating costs and prioritizing improvements, as described in Chapter 9.

> **Input from many sources may be needed to identify, develop, and evaluate potential solutions.**

1. IDENTIFY POTENTIAL IMPROVEMENTS

Table 8-1 identifies potential improvements to address given needs. This table is not meant to be a complete collection of needs and solutions.

TABLE 8-1 – POTENTIAL IMPROVEMENTS TO ADDRESS SPECIFIC NEEDS

CONCERN	POTENTIAL IMPROVEMENTS
Fixed-route on-time performance does not meet target	Update schedules to better reflect actual travel times
	Realign route to reduce delay
	Consolidate stops to improve travel times
	Introduce electronic fare payment, prepaid fares, level boarding, etc. to reduce dwell times at stops
	Implement transit preferential treatments to reduce adverse impacts of traffic congestion
Paratransit on-time performance target not met	Upgrade scheduling processes to assign and route vehicles more effectively
Fixed-route buses are too crowded	Adjust schedules to better match commuting patterns
	Use larger buses
	Address reliability issues, if crowding is due to bus bunching
	Improve service frequency
Fixed-route transit does not meet productivity target (e.g., passengers/hour)	Focus marketing efforts on low-performing routes and increase overall system marketing
	Realign low-performing routes to better serve demand and transit-supportive land uses
	Adjust frequency and/or service span of low-performing routes
	Review ease of access to stops along the route

CONCERN	POTENTIAL IMPROVEMENTS
Paratransit customers are on hold too long when they call to schedule a trip	Cross-train staff to help support reservations staff during busy times
	Allow trip subscriptions
	Educate riders about non-busy call times and about how the pickup window works to reduce "where's my ride" calls during the pickup window
	Implement technology to handle certain types of calls
Riders often miss transfers	See on-time performance target solutions above.
	Update schedules to better reflect transfer time requirements
Farebox recovery ratio target not met	See efficiency target and ridership target solutions below.
Fixed-route transit does not meet efficiency target (operating cost/hour)	Realign route to minimize out-of-direction travel and delay
	Truncate/consolidate/short turn routes to eliminate or reduce service in low-ridership segments
	Consolidate stops to improve travel times
	Introduce electronic fare payment, prepaid fares, level boarding, etc. to reduce dwell times at stops
	Implement transit preferential treatments to reduce adverse impacts of traffic congestion
	Introduce more fuel-efficient vehicles
	Review administrative costs
Paratransit does not meet efficiency target (operating cost/hour)	Upgrade scheduling processes to assign and route vehicles more efficiently
	Introduce more fuel-efficient vehicles
Customer satisfaction does not meet target	Conduct targeted outreach to better understand concerns and vet potential solutions
	Improve staff training with respect to specific concerns
	Increase quality of transit service offered in the area of concern
Bus yard is not large enough to store buses	Expand or provide additional garage/maintenance facilities
Bus stops do not meet amenities target(s)	Install more bus shelters, benches, etc.
Install more bus shelters, benches, etc.	Work with local jurisdictions to prioritize sidewalk connections (including curb cuts and ramps) at more bus stops
Park-and-ride lot demand does not meet target	Increase marketing and outreach to employers to generate demand
	Increase amount/span of transit service offered to increase park-and-ride demand
Average miles between service disruptions does not meet target	Improve adherence to preventative maintenance schedules
	Replace older vehicles and maintenance facilities/equipment
Safety incidents target not met (e.g., crashes/mile)	Improve staff training with respect to specific concerns
	Replace older vehicles
Security incidents target not met	Install/upgrade of security equipment (e.g., CCTV cameras)

Note: This table is illustrative. It is not a complete list of concerns or potential improvements.

CONCERN	POTENTIAL IMPROVEMENTS
Ridership per capita target not met	Conduct targeted outreach to develop transit markets
	Increase marketing activities
	Increase service reliability
	Install features that contribute to rider comfort (e.g., vehicle and stop amenities)
	Expand park-and-ride lot network
	Increase amount of transit service offered
Emissions target not met	Replace older vehicles
	Convert fleet to alternative fuels
Fuel economy target not met	Improve staff training with respect to specific concerns
	Replace older vehicles
	Convert fleet to alternative fuels
	See on-time performance target and efficiency target solutions above.
Intercity connections not adequate	Realign routes to improve connectivity
	Coordinate with intercity transit providers

More than one option may be identified for each need. For example, options can consist of different techniques for addressing the need (e.g., schedule changes vs. transit preferential treatments to address reliability issues) or can be different variations of the same improvement (e.g., 20- vs. 15-minute headways, or two route options for connecting points A and B).

The options need to be just detailed enough to allow for planning-level cost estimation. For example, for new, extended, or realigned routes, the key information is round-trip travel time (including layovers), proposed frequency, and proposed service span. This information will allow providers to determine the number of annual service hours and vehicles required for the route, both of which are needed to estimate operating and capital costs. Identifying specific bus stop locations or developing a schedule for the route, on the other hand, is more detail than needed to evaluate the option; such details can be fleshed out in implementation, if the improvement is selected.

When identifying improvements, it is important to think about possible side effects. For example, doubling the frequency on a fixed route means twice as many buses will be needed to operate it, assuming travel speeds stay the same. Does the provider's bus yard have enough space to store the additional buses, or would it need to be expanded before the improvement could be implemented?

Potential improvements that are highly unlikely to be feasible can be screened out at this point. If it is unclear whether or not an improvement is likely to be feasible, retain it for further consideration.

2. DEVELOP ALTERNATIVES (OPTIONAL)

In addition to addressing specific improvement needs, some providers may be interested in evaluating bigger-picture, "what-if" questions as part of their TDP. For example, what could service look like if more funding was available, or how might different land use growth scenarios affect demand? These questions typically affect the transit system as a whole. A set of specific improvements to address bigger-picture issues is called an "alternative" in this guidebook.

08

TYPES OF BIG-PICTURE ISSUES THAT LEND THEMSELVES TO DEVELOPMENT OF ALTERNATIVES:

- **Financial possibilities:** Status quo, various levels of increased funding, decrease in funding due to a recession impacting tax revenues, etc.

- **Service balance possibilities:** Different allocations of operating budget between providing service coverage and maximizing ridership on the most productive routes

- **Structural possibilities:** Frequency vs. service span improvements, expansion into new areas vs. providing more service in the current service area, infrastructure and technology investments to improve transit speed and reliability, etc.

- **Land use possibilities:** Status quo, different levels of growth, densification along transit corridors, etc. Land use alternatives need to be coordinated with local jurisdictions.

Each alternative should have a theme that corresponds to the big-picture issues it addresses; themes distinguish different paths the transit provider might take. Themes also make it easier to communicate the purpose of the improvements included in the alternatives.

Conferring with stakeholders during the alternatives development process is encouraged. Decisions about transit investments should be collaborative.

EXAMPLE ALTERNATIVES INCLUDE THE FOLLOWING:

- **Systemwide Service Enhancements:** Systemwide headway and service span improvements [specifying what and where] + systemwide bus stop enhancements

- **Increased Coverage, Alternative A:** Implementation of new routes [specifying new areas to be served]

- **Increased Coverage, Alternative B:** Conversion of existing radial transit network to a grid transit network

- **Technology Investments:** Upgrading provider web site, upgrading scheduling/dispatching system, implementation of an Automated Vehicle Location system, etc.

Funding constraints, priorities, and competing needs may force providers to choose between certain kinds of improvements (e.g., frequency vs. service coverage) to include in alternatives.

Alternatives do not need to be mutually exclusive. A given improvement can be included in multiple alternatives. Alternatives also need not be cost-constrained—though they should be realistic as well as visionary.

Once the alternatives have been developed, they must be described with just enough detail to allow for planning-level cost estimation and ridership demand estimation, similar to the process described in Step 1 above for improvement options developed to address specific needs.

The selected (preferred) alternative from a TDP process should identify the main elements needed to implement the alternative. Greater detail should be addressed in future studies.

TABLE 8-2 – TOOLS FOR QUANTITATIVE EVALUATION OF IMPROVEMENTS

METHODOLOGY	APPLICATION	DATA & RESOURCE NEEDS
Transit Cooperative Research Program [TCRP] Report 161 Method: *See Table 7-2.*	Systemwide	Low
Transit Planning Tools: See Table 7-2.	Geographic scale varies Large and small urban areas	High
TCRP Report 165 Methods: *The Transit Capacity & Quality of Service Manual* (TCQSM) includes methods for evaluating changes in transit service coverage, transit travel time, stop/station capacity, etc.	Geographic scale varies All areas	Varies
Elasticities: Elasticity factors can be used to estimate the ridership impacts of changes in fare, travel time, frequency, and speed. See **Appendix B** for more information.	Corridors and routes	Low

3. EVALUATE IMPROVEMENTS

Evaluate potential improvements in light of their operating and capital cost implications (discussed in Chapter 9), ridership impacts, and compatibility with provider goals and objectives. This evaluation can be quantitative or qualitative. Potentially useful tools for quantitative evaluation are listed in **Table 8-2**.

It is important not to get too focused on small details when evaluating alternatives of systemwide scope. Most alternatives will require more study to work out details and for the provider to verify the course of action before implementation.

4. REFINE & RE-EVALUATE

Evaluating improvements and alternatives will likely reveal a need to refine them. The need for refinement might be shaped by answers to the following questions:

- Can the improvement adequately mitigate the need?

- Can one improvement address the need more effectively than another?
- Will one improvement have a systemwide benefit that another improvement will not?
- Is environmental justice served by a given improvement?
- Would goals and priorities be better served by a different improvement?

It may be necessary to repeat Steps 3 and 4 in the analysis process a number of times to produce improvements (or alternatives) that are ready for public review and comment.

5. FORECAST DEMAND & FARE REVENUE

A ridership forecast for the refined improvements (and alternatives) supports the development of revenue forecasts. Potential tools for ridership forecasting are identified in **Tables 7-2** and **8-2**. To estimate future revenue, start with the average fare paid per rider based on current performance (which considers discounted fares), adjust it for any fare changes identified in Chapter 7, and multiply it by forecast system ridership.

08

SUMMARIZE RESULTS

Summarize the refined improvements (and alternatives). Include a brief description of each improvement and its anticipated impacts.

CONSIDERATIONS

Consider opportunities to collaborate with neighboring transit providers to reduce costs and enhance service.

The transit provider preparing the TDP should also consider how its changes could affect neighboring systems.

EXAMPLE

Performance Measure [Ch. 5]
Annual ridership per capita (a measure of mobility)

Performance Target [Ch. 5]
12.0 annual riders per capita based on service area population

Existing Performance [Ch. 6]
2016 annual riders per capita for an example transit system:

Systemwide | 10.0 (target: 12.0)

Performance-Based Needs Assessment [Ch. 7]
In this example, annual ridership per capita is not meeting the target. Thus, there is a need to consider strategies and investments to increase systemwide ridership.

Potential Improvements To Address Needs [Ch. 8]
Step 1. Potential improvements to increase systemwide ridership include targeted outreach to develop specific markets, increased marketing activities in general, increased service reliability, increased installation of vehicle and bus stop amenities (for rider comfort), expansion of the park-and-ride lot network, reduced fares, and increases in the amount of transit service offered (new/realigned routes, increased service span, increased frequency, etc.).

Step 2 (Optional). Increased outreach and marketing could be included in an initial alternative with the theme 'Market Development and Growth.' Vehicle enhancements, bus stop upgrades, and park-and-ride lot network enhancements could be included in an initial alternative themed 'Service Enhancements.' The amount of service offered could be included in an initial alternative themed 'Service Expansion.'

Step 3. Have past targeted outreach efforts resulted in significant ridership increases? Do customer satisfaction surveys, stakeholder outreach strategies conducted for the TDP, or analyses in Chapters 6 and 7 indicate that service coverage, service reliability, vehicle or bus stop amenities, park-and-ride lot access, fares, service frequencies, service span, etc. are limiting ridership?

Step 4. The improvements included in the initial alternatives might need adjustment based on the results of Step 3. If Step 3 analysis indicates that marketing and outreach, vehicle and stop infrastructure, and fares are acceptable, then the focus should be on service improvements.

Step 5. After the list of potential improvements to ridership per capita is analyzed, the ridership impacts of specific service improvements might be estimated using systemwide evaluation tools like TBEST or Remix.

RESOURCES

**Transit Capacity and Quality of Service Manual,
Third Edition (TCRP Report 165)**

Author: TCRP

Availability: http://www.trb.org/Main/
Blurbs/169437.aspx

Published: 2013

Excel spreadsheet tools are available at
the above link, along with presentations
summarizing the content of the report.

Burns, OR (Burns Paiute Tribe Transportation Service)

Pendleton, OR (Kayak Public Transit)

WHY INCLUDE THIS IN A TDP?

Financial assessment is needed to produce a financial plan that supports implementation of TDP recommendations. A financial plan should include recurring as well as one-time capital and operating expenses to guide provider investments over the horizon of the TDP. The financial plan can be used in capital improvement programs or other planning documents. It shows what can be accomplished with current and projected funding and where funding shortfalls are projected.

IDENTIFYING FUNDING SCENARIOS

The TDP should evaluate one or more future funding scenarios. The funding scenarios should cover a 20-year horizon, with more detail provided for the first 10 years. The sources of any funding increases included in the scenarios must be realistic. **Figure 9-1** shows an example funding forecast for a "status quo" funding scenario. **Table 9-1** provides a template for identifying available operations and capital costs by system component and year.

> If future funding is constrained, improvements that require funding should be ranked with respect to the priorities established in the provider's vision and goals and/or plans such as the TSP.

EXAMPLE FUNDING SCENARIOS:

- ✔ **No increase in current funding levels (with or without inflation)**
- ✔ **20% increase in funding (could be expressed in service hours instead)**
- ✔ **50% increase in funding (could be expressed in service hours instead)**
- ✔ **Funding increase due to a specific source that might become available**
- ✔ **Near-term (five-year) and mid-term (10-year) scenarios plus a long-term (20-year, illustrative) scenario**
- ✔ **Decrease in funding (e.g., due to recession impacts on tax receipts)**
- ✔ **Maintenance of current system (which may or may not require increased funding)**

COSTING IMPROVEMENTS

Cost the improvements from Chapter 8. Include capital and operating costs. Include scheduled vehicle replacement and other costs that might be independent of any needs identified in the TDP process. Document assumptions and the source of unit costs. **Table 9-2** shows an example of developing an operating cost forecast. **Table 9-3** provides a template for identifying operations and capital cost needs by potential improvement by year.

It is unlikely that all needs can be addressed given the funding anticipated under a given scenario. The provider will need to choose what should be funded and what should not. Needs likely must be prioritized.

> Make sure it is understood what is included in operating costs. Do operating costs include marketing, for example?

FIGURE 9-1 - FUNDING FORECAST ASSUMING STATUS QUO [EXAMPLE]
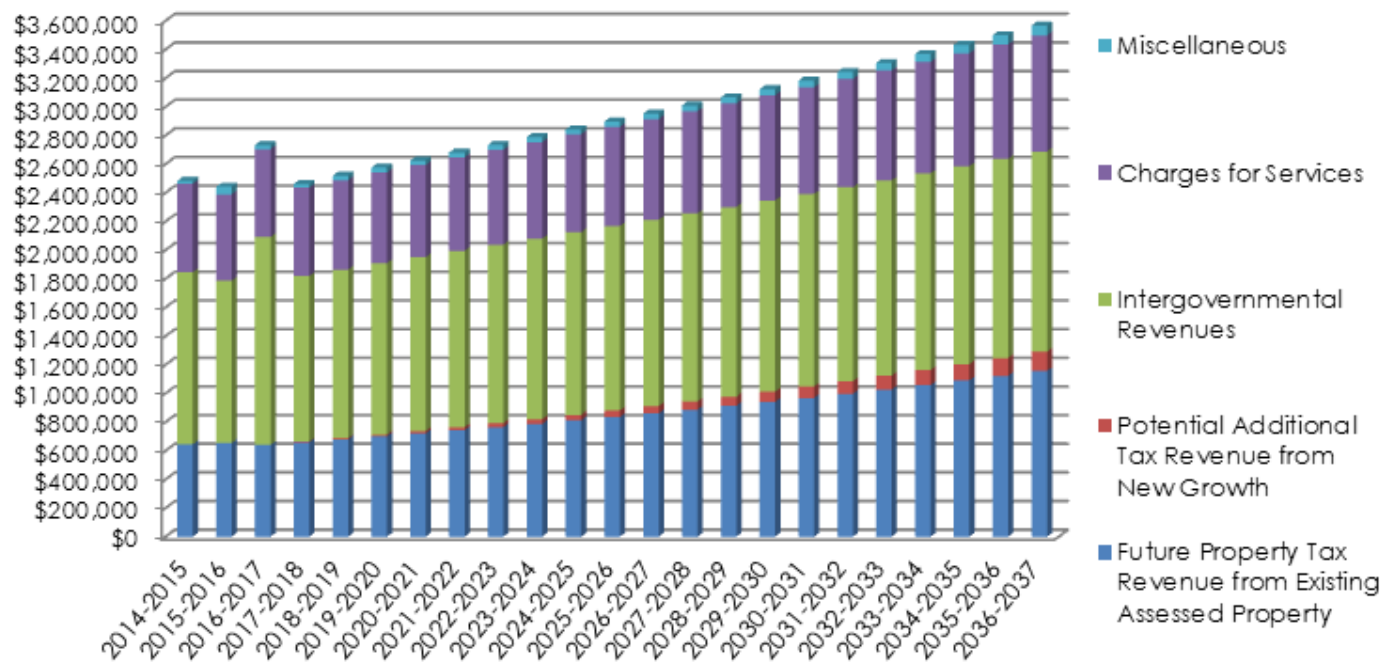
1. *Property tax revenue increases assume 3% annual growth in assessed value but no increases in rate or number of households.*

2. *Assumes cumulative increase of households within the county based on estimated population growth and a constant average household size.*

3. *Charge for services is assumed to increase relative to population increase, and accounts for an annual 1% increase in fares.*

4. *Miscellaneous revenue sources expected to increase 1% annually.*

5. *Total operating budget estimates calculated based on today's dollars (i.e., no projected inflation applied to projections)*

TABLE 9-1 - FUNDING SCENARIOS [TEMPLATES]

Scenario [1]: Operations & Maintenance Funds Available or Anticipated

SYSTEM COMPONENT*	NEAR TERM					MID TERM					LONG TERM		
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2035	2040
Total													

Fixed-route transit, paratransit, administration, marketing, technology, etc.

Scenario [1]: Capital Funds Available or Anticipated

SYSTEM COMPONENT*	NEAR TERM					MID TERM					LONG TERM		
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2035	2040
Total													

Fixed-route transit, paratransit, administration, marketing, technology, etc.

TABLE 9-2 - UNIT COST DEVELOPMENT [EXAMPLE]

ROUTE	HOURLY BASED COSTS ($)	MILEAGE BASED COSTS ($)	ADMIN. COSTS ($)	TOTAL COSTS ($)	SERVICE HOURS	TOTAL COST/ HOUR
Newport Dial-a-Ride (DAR)	62,561	17,063	28,537	108,161	2,150	$50.31
Lincoln City DAR	62,736	21,257	30,102	114,095	2,156	$52.92
Total DAR	125,297	38,320	58,639	222,256	4,306	$51.62
North Route	178,401	94,466	97,793	370,659	6,131	$60.46
South Route	106,266	55,611	58,015	219,893	3,652	$60.21
East County	178,401	85,394	94,542	358,336	6,131	$58.45
Total County Route	463,068	235,471	250,350	948,889	15,914	$59.63
Coast to Valley	98,614	76,268	62,676	237,558	3,389	$70.10
Newport City Loop	107,459	40,451	53,010	200,920	3,693	$54.41
Lincoln City Loop	97,159	36,302	47,831	181,292	3,339	$54.30
Total City Loop	204,618	76,753	100,841	382,212	7,032	$54.35
Total	**891,596**	**426,812**	**100,841**	**1,790,914**	**30,641**	**$58.45**

TABLE 9-3 - FUNDING NEEDS [TEMPLATES]

Scenario [1]: Operations & Maintenance Funds Needed

IMPROVEMENT	NEAR TERM					MID TERM					LONG TERM	
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 15	YEAR 20
Total												

Scenario [1]: Capital Funds Needed

IMPROVEMENT	NEAR TERM					MID TERM					LONG TERM	
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 15	YEAR 20
Total												

APPROACHES TO FUNDING ALTERNATIVES

The Oregon Department of Transportation (ODOT) maintains a list of transit funding opportunities managed by the State. This list includes state and federal transit funding sources. Local funding might come from multiple sources, including fare revenue, parking fees, tax increment financing, multimodal impact fees, and sponsorships.

Developing a sustainable transit funding source is something that must happen locally, though a TDP could help a provider get to the point of having the local funding discussion.

See Chapter 2 and the Resources section of this chapter for additional information.

RESOURCES

"Public Transportation Funding Opportunities"

Author: ODOT

Availability: http://www.oregon.gov/ODOT/RPTD/Pages/Funding-Opportunities.aspx

Published: Updated on an ongoing basis

Transit in Small Cities: A Primer for Planning, Siting, and Designing Transit Facilities in Oregon

Author: Oregon Transportation and Growth Management Program

Availability: http://www.oregon.gov/LCD/TGM/docs/fulltransitprimer4-4-13.pdf

Published: March 2013

"Grant Programs"

Author: Federal Transit Administration (FTA)

Availability: https://www.transit.dot.gov/grants

Published: Updated on an ongoing basis

Florida Department of Transportation Guidance for Producing a Transit Development Plan

Author: Center for Urban Transportation Research, Tindale-Oliver and Associates, Inc., and Dan Boyle & Associates, Inc.

Availability: http://www.fdot.gov/transit/Pages/TDPGuidanceFinal.pdf

Published: 2009

This report includes TDP guidance and instructions for using the TDP financial tool available at http://www.fdot.gov/transit/Pages/TDPFinancialPlanningTool.xls. Some funding programs referenced in the tool are no longer available.

Financing Capital Investment: A Primer for the Transit Practitioner (Transit Cooperative Research Program [TCRP] Report 89)

Author: TCRP

Availability: http://www.trb.org/Publications/Blurbs/152586.aspx

Published: 2003

This report provides principles and approaches for financing capital projects. Some funding sources identified in this report may be dated.

Methods for Financing Transportation Infrastructure

Author: ODOT

Availability: http://library.state.or.us/repository/2010/201010261316072/index.pdf

Published: June 2010

Route

2

McMinnville
City Route
East/West

Yamhill
County
Transit
Area

SCHOOL BUS

START OF YAMHILL CO.

Head Start of Yamhill Co...
NOW HIRING
BUS DRIV...
CALL 503-47...

Yamhill, OR (Yamhill County Transit)

RECOMMENDATIONS AND IMPLEMENTATION PLAN

WHY INCLUDE THIS IN A TDP?

A TDP implementation plan provides a guide for realizing the improvements and changes recommended through the TDP process (and which were prioritized in Chapter 9). A TDP implementation plan also provides a guide for evaluating whether the improvements and changes are having the desired effect. Thus, the implementation plan summarizes the identified improvements and changes, strengthens the link between the TDP and other planning processes, and supports performance monitoring. An implementation plan makes the TDP a living document.

The implementation plan should cover each alternative that moves forward from Chapters 8 and 9.

SUMMARY OF TDP RECOMMENDATIONS

The implementation plan should include a table recapping all recommended transit improvements. At minimum, this summary table should include a brief description of each improvement and change, along with the planned time frame for implementation. It might also include information about costs and the parties that are responsible for implementing the improvements and changes.

Improvements prioritized in Chapter 9 should be recapped as part of the implementation plan.

The summary table should include all recommended improvements and changes, even those that have no associated operating or capital cost. **Table 10-1** provides a template for a summary table.

TABLE 10-1 – SUMMARY OF RECOMMENDED IMPROVEMENTS [TEMPLATE]

PROJECT OR INITIATIVE	IMPLEMENTATION TIME FRAME	COST	POTENTIAL FUNDING SOURCE	IMPLEMENTING AGENCY/ DEPARTMENT
[Project]	[Year]	[Cost]	[Funding Source]	[Implementer]
[Project]	[Year]	[Cost]	[Funding Source]	[Implementer]
[Project]	[Year]	[Cost]	[Funding Source]	[Implementer]
[Project]	[Year]	[Cost]	[Funding Source]	[Implementer]
[Project]	[Year]	[Cost]	[Funding Source]	[Implementer]
[Project]	[Year]	[Cost]	[Funding Source]	[Implementer]

10

OTHER IMPLEMENTATION PLAN COMPONENTS

The TDP should describe how the plan's recommendations will be implemented. The components of a TDP implementation plan might include the following:

- Schedules for conducting any environmental justice analyses and implementing recommended improvements (including phasing)

- Criteria for evaluating newly implemented improvements and a timeline for when those evaluations will occur

- Strategies for ensuring that funding is available to maintain the transit system and carry out TDP recommendations; these strategies might address maintaining existing funding sources, creating new funding sources, and/or updating cost-sharing arrangements with other entities

- Strategies for implementing changes to provider governance and administrative structures

- Strategies for addressing specific constraints on transit system operations and development

- Changes to stakeholder partnerships and coordination mechanisms necessary to realize TDP recommendations

- Desired amendments to local land development codes, comprehensive plans, and similar documents

- Discussion of how TDP data and analyses can be used to inform other planning efforts (e.g., TSP updates)

- Schedule for updating the TDP

- Performance monitoring (as described in Chapter 5)

FIGURE 10-1 – EXAMPLE PROJECT-SPECIFIC IMPLEMENTATION PLAN

PROJECT

Systemwide Bus Stop Consolidation (i.e., elimination of under-utilized bus stops so as to decrease travel time and improve schedule reliability)

IMPLEMENTATION SCHEDULE

2018

- Collect boarding and alighting data at all bus stops.

- Develop and apply criteria for identifying bus stops that are candidates for elimination.

- Conduct public outreach activities to provide notice about the bus stop consolidation initiative and its purpose. Solicit rider feedback and input on the bus stops that are proposed for elimination.

- Develop final recommendations for provider board approval.

2019

- Update on-line and printed schedules and maps as needed.

- Eliminate the board-approved bus stops.

2020

- Measure the impacts of the bus stop consolidation (i.e., travel times and schedule reliability) to determine whether or not the bus stop consolidation initiative was effective in achieving its purpose.

STRATEGIES

Coordinate with city, county, and state agencies to determine if bus stops can be eliminated in conjunction with programmed roadway improvement projects, thus reducing costs for the provider.

Bend, OR (vRide Vanpool)

Figure 10-1 is an example of a project implementation plan.

Providers might also review the recommendations of previous TDPs and other relevant plans to learn what did and did not work in the past.

RESOURCES

A Guidebook on Transit-Supportive Roadway Strategies (Transit Cooperative Research Program [TCRP] Report 183)

Author: TCRP

Availability: https://www.nap.edu/download/21929

Published: 2016

See the implementation guidance in Chapter 3 of TCRP Report 183. Most of the case studies in the chapter are from large urban areas, but the guidance applies even to small-scale projects like bus stop relocation.

Medford, OR (Rogue Valley Transit District)

DOCUMENTATION

WHAT SHOULD TDP DOCUMENTATION ACHIEVE?

The final report prepared to summarize the TDP process and its outcomes should present the provider's approach to developing the TDP, describe existing and future transit conditions in a meaningful way, make recommendations for transit improvements, and provide background information and/or analyses to support the recommendations. The report should be reader-friendly, using graphical elements where possible to convey information clearly and concisely.

Anticipate preparing draft and final plans and presenting the final plan to stakeholders.

ORGANIZATION

The TDP report could be organized as follows:

- Executive summary
- Report (with chapters that can correspond to the structure of this guidebook)
- Appendices
  › To provide background data
  › To provide more detail about specific topics as needed.
  › To document public outreach activities (e.g., copies of notices posted and comments received).

Optionally, the provider can develop the body of the report akin to an expanded executive summary (in lieu of preparing a separate executive summary). The appendices of such a report would contain all of the technical details of the TDP analyses. The body of the report would provide more substance than a conventional executive summary but would still be accessible to a wide audience.

STYLE

The resources listed at the end of this chapter may help maximize the reader-friendliness and accessibility of the TDP report. Key considerations include the following:

- Use short, simple sentences.
- Avoid technical jargon.
- Use graphical elements such as charts to convey information.
- Use lists instead of dense paragraphs.
- Use photographs to document activities that occurred as part of the TDP development processes.

Consider how the report will be distributed when developing its format. For example:

- The TDP report will be more accessible to the public if it can be downloaded from the provider's web site as both low- and high-resolution files and if each of its chapters can also be downloaded individually.
- Color graphics should continue to be meaningful if the TDP report is printed or reproduced in black and white, or the information should also be presented in table format.

RESOURCES

Writing User-Friendly Documents: A Handbook for U.S. Department of Transportation Drafters

Author: Plain Language Action and Information Network

Availability: https://www.transportation.gov/sites/dot.gov/files/docs/Writing%20User-Friendly%20Documents.pdf

Published: Undated

"18F Content Guide"

Author: 18F

Availability: https://content-guide.18f.gov/

Published: Unknown

OTHER COMPONENTS

WHY INCLUDE OTHER STUDIES IN THE SCOPE OF A TDP?

Preparation of a TDP is an opportunity to conduct other studies that might:

- benefit from close coordination with TDP data collection, analyses, and outreach activities or
- provide additional information to support TDP decision-making.

OPTIONAL STUDIES

The following studies could be conducted if the provider wishes to go into more detail on some of the topics that were introduced in earlier chapters. This is not an exhaustive list of optional studies, and some of these studies may not be applicable to all providers.

VISIONING AND GOAL-SETTING

The transit provider could update its vision and goals. The complexity of a visioning effort varies based on purpose, audience, and budget. A visioning effort typically involves significant stakeholder engagement. It can build on and/or be integrated with a larger community vision.

Conduct this exercise as early as possible in the TDP process. It shapes the needs assessment, as noted in Chapter 5.

DEVELOPMENT OF A PERFORMANCE MEASUREMENT PROGRAM

See Chapter 5 for more information. As noted in Chapter 5, a performance measurement program is about using performance results to guide provider decision-making, not just reporting specific performance measures.

Ideally, conduct this activity early in the TDP process. It could occur in conjunction with the existing conditions analysis (Chapter 6).

DEVELOPMENT OF TRANSIT DESIGN STANDARDS

Transit design standards specify operational and/or design criteria for transit services and infrastructure. For example, design standards might establish bus stop location criteria or standards for the design of bus pull-outs. Design standards might be developed or updated to support implementation of TDP recommendations.

Conduct this activity late in the TDP process, after alternatives are developed, to support desired infrastructure investments.

COMPREHENSIVE OPERATIONS ASSESSMENT

A comprehensive operations analysis (COA) is a very detailed assessment of existing transit conditions. COA outcomes might shape alternatives development and financial planning.

Conduct this analysis as part of the existing conditions analysis (Chapter 6).

12

TITLE VI PROGRAM

The federal government requires recipients of federal funds to submit a Title VI Program every three years to demonstrate compliance with Title VI of the Civil Rights Act of 1964. TDP data and analyses could be used to support the development of the Title VI Program.

Conduct this analysis as part of alternatives evaluation (Chapter 8).

DEVELOPMENT OF A TRANSIT ASSET MANAGEMENT (TAM) PLAN

FTA requires providers to report asset condition information to the National Transit Database. Such an asset condition report might be more detailed than the infrastructure inventory included in a TDP. Asset condition information might also be represented in the provider's performance measures.

Conduct this effort as part of the existing conditions analysis (Chapter 6).

PROPOSED AMENDMENTS TO LOCAL CODES AND PLANS

To facilitate implementation of TDP recommendations and achievement of the transit vision, the transit provider could review and recommend amendments to local land development codes, comprehensive plans, and similar documents.

Conduct this activity to support development of the TDP implementation plan (Chapter 10).

DEVELOPMENT OF A PARK-AND-RIDE PROGRAM

The transit provider could develop a park-and-ride program or broader transportation demand management program to enhance transit access and expand transit's reach. Stakeholder partnerships are likely to be required.

Conduct this activity as part of alternatives evaluation (Chapter 8).

REVIEW OF GOVERNANCE AND/OR ADMINISTRATIVE STRUCTURE

The transit provider could review whether or not its current governance and/or administrative structure are the most effective and efficient to support existing or planned public transportation in the service area.

Such a review might be triggered (a) when a public demand-responsive or deviated fixed-route provider program is at the point of considering transitioning to fixed-route service or (b) when considering consolidating several smaller providers into a regional provider.

Timing of this effort depends on the purpose of the review.

RESOURCES

Transit in Small Cities: A Primer for Planning, Siting, and Designing Transit Facilities in Oregon

Author: Oregon Transportation and Growth Management Program

Availability: http://www.oregon.gov/LCD/TGM/docs/fulltransitprimer4-4-13.pdf

Published: March 2013

This primer gives small-city transit providers in Oregon guidance on planning, designing, and locating transit facilities (e.g., bus shelters, signage, access-ways to transit stops, and other amenities) to support transit systems. The primer lays out a basic planning process and offers tips for success that can be tailored to individual cities. It identifies questions that small-city transit providers must address when planning and siting transit facilities in order to support the goals that communities set for

themselves. Finally, it draws upon successful Oregon examples to provide relevant advice and illustrate best practices.

Transit Street Design Guide

Author: National Association of City Transportation Officials

Availability: https://nacto.org/publication/transit-street-design-guide/

Published: April 2016

Guide for Geometric Design of Transit Facilities on Highways and Streets, 1st Edition

Author: American Association of State Highway and Transportation Officials

Availability: Purchase at https://bookstore.transportation.org

Published: 2014

American Public Transportation Association (APTA) Standards Program

Author: APTA

Availability: http://www.apta.com/resources/standards/Pages/default.aspx

Published: Varies

APTA has published several Recommended Practice documents that might inform the development of transit design standards. These include APTA-BTS-BMF-RP-001-11("Architectural and Engineering Design for a Transit Operating and Maintenance Facility") and APTA-BTS-BRT-RP-002-10 ("Recommended Practice for Bus Rapid Transit Stations and Stops").

"Title VI Requirements and Guidelines for Federal Transit Administration Recipients" (Circular FTA C 4702.1B)

Author: Federal Transit Administration (FTA)

Availability: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Title_VI_FINAL.pdf

Published: October 2012

Guidelines for Addressing Title VI and Environmental Justice in Transportation Planning

Author: Oregon Department of Transportation

Availability: http://www.oregon.gov/ODOT/Planning/Documents/Title-VI-Guidelines-Transportation-Planning.pdf

Published: January 2015

TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation

Author: FTA

Availability: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/regulations-and-guidance/asset-management/60361/tam-facility-performance-measure-reporting-guidebook.pdf

Published: April 2017

Decision-Making Toolbox to Plan and Manage Park-and-Ride Facilities for Public Transportation: Guidebook on Planning and Managing Park-and-Ride (Transit Cooperative Research Program [TCRP] Report 192)

Author: TCRP

Availability: http://www.trb.org/Main/Blurbs/175966.aspx

Published: 2017

This research occurred as TCRP Project H-52. The two documents listed subsequently were prepared under Project H-52.

Decision-Making Toolbox to Plan and Manage Park-and-Ride Facilities for Public Transportation: Research Report and Transit Agency Case Studies (TCRP Web-Only Document 69)

Author: TCRP

Availability: http://www.trb.org/Main/Blurbs/176204.aspx

Published: 2017

12

Park-and-Ride State-of-the-Practice Scan: Summary of Results (TCRP H-52)

Author: Texas A&M Transportation Institute

Availability: https://tti.tamu.edu/group/transit-mobility/resources/tcrp-h-52-park-and-ride-summary-of-results/

Published: 2016

Most of the providers covered in this document are larger transit agencies that have used model-based techniques to estimate park-and-ride lot demand.

Governance Models for Regional Transit Coordination

Author: The University of Kansas Transportation Center

Availability: http://www2.ku.edu/~kutc/pdffiles/KDOT_Regional_Transit_Pilot_Study/11-05-10-KUTCGovernanceModelsWhitePaper.pdf

Published: November 2010

Transit Board Member Handbook

Author: APTA

Availability: https://www.apta.com/resources/reportsandpublications/Documents/2014-Transit-Board-Member-Handbook.pdf

Published: July 2014

This document discusses topics relevant to transit agency administration.

DEFINITIONS & ACRONYMS

DEFINITIONS

The following are selected terms used in this guidebook. The definitions were compiled from the (OPTP) Working Glossary, Chapter 11 of the *Transit Capacity & Quality of Service Manual* (CQSM), 3rd Edition, and the content of this document. Additional definitions can be found in the OPTP Working Glossary and TCQSM Chapter 11.

Alternative. For the purposes of this guidebook, an alternative is a set of specific transit improvement options.

Americans with Disabilities Act (ADA). Passed by Congress in 1990, the ADA mandates equal opportunities for people with disabilities in the areas of employment, transportation, communications, and public accommodations. Under the ADA, most transportation providers are obliged to purchase lift-equipped vehicles for their fixed-route services and must ensure system-wide accessibility of their demand-responsive services to people with disabilities. Public transit providers also must supplement their fixed-route services with paratransit services for those people unable to use fixed-route service because of disabilities.

Availability. Refers to whether or not transit is available to a rider spatially and in time (e.g., stops close enough to origins and destinations for the rider to use and vehicles running at times useful to the rider).

Capital Costs. Refers to the costs of the long-term assets of a public transit system, such as property, buildings, and vehicles. Preventive maintenance, mobility management, and certain kinds of operating expenses may be eligible to be treated as "capital" and are eligible to be reimbursed based on the percentage of federal and local match for capital projects.

Community Transportation. The family of transportation services in a community, including public and private sources that are available to respond to the mobility needs of all community members.

Commuter Bus. Transit service provided on a regularly scheduled basis during peak travel periods for users commuting to work, school, and similar destinations.

Connectivity. The presence of useful, integrated links people can use to move between places, transportation system modes, or segments of the same mode.

Coordinated Public Transit–Human Services Transportation Plan. Also called coordinated plan. Refers to a locally developed plan for coordinating local public transportation and human service agency transportation services that aims to maximize the programs' collective coverage by minimizing duplication of services. The coordinated plan should be developed through a process that includes representatives of public, private, and non-profit transportation and human services providers, and participation by the public. Any public agency applying for federal funding of a new or expanded service under Section 5310 must show that the project is identified in a locally developed coordinated plan.

Coverage. Also called availability. Refers to spatial availability of transit, temporal availability of transit, and how far one may travel by transit (i.e., the service area).

Demand-Responsive Service. Also called demand-response service, paratransit, and dial-a-ride. As defined by FTA, demand-responsive service is any non—fixed-route system of transporting individuals that requires advanced scheduling by the customer, including services provided by public entities, nonprofits, and private providers. A "demand-responsive system" is one where passenger trips are generated by calls from passengers or their agents to the transit provider, who then dispatches vehicles to pick the passengers up and transport them to their destinations.

A

Effectiveness. The degree to which the desired level of transit service is being provided to meet stated goals and objectives (e.g., the percentage of service area population that is within walking distance of a transit stop).

Efficiency. Generally refers to the ratio of service outputs (e.g., vehicle miles or hours) to service inputs (e.g., capital and labor) in a given public transit system. Transit system efficiency can be measured in a number of ways, such as cost per vehicle mile, population served per vehicle in maximum service, the peak-to-base ratio (vehicles used in peak service divided by vehicles used in base service), or the farebox recovery ratio.

Environmental Justice (EJ). Refers to (a) the presence of and actions to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations; (b) full and fair participation by all potentially affected communities in the transportation decision-making process; and (c) preventing the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Express Bus. Bus service with a limited number of stops, either from a collector area directly to a specific destination or in a particular corridor with stops en route at major transfer points or activity centers. Express bus service usually uses freeways or busways where they are available.

Farebox Revenue. The money collected from riders as payment for travel on public transportation, either at the time the trip is made (e.g., cash fare) or in advance (e.g., monthly passes).

Federal Transit Administration (FTA). A component of the U.S. Department of Transportation that administers federal funding to support a variety of locally planned, constructed, and operated public transportation systems throughout the U.S. FTA provides financial assistance for capital, operating, and planning costs of these public transportation systems. It also sponsors research, training, technical assistance, and demonstration programs.

Fixed-Route Transit Service. Transit service where vehicles run on regular, scheduled routes with fixed stops and do not deviate. Typically, fixed-route service is characterized by printed schedules or timetables, designated bus stops where passengers board and alight, and the use of larger transit vehicles.

Flexible Routing. Flexible route service follows a direction of travel but allows for deviation or re-routing along the way to accommodate specific trip requests. Examples of flexible-route systems are route deviation and point deviation. The schedule may be fixed or flexible.

Governance. Refers to the legal framework under which a transit provider is organized, funded, and administered. Example governance models are transit districts (which may have taxation authority), county transit systems, and municipal transit systems.

Headway. The scheduled length of time at a stop between buses following the same route. If buses operating along Route A arrive at Stop 1 at 9:00, 9:30, 10:00, 10:30, and 11:00, Route A is operating on half-hour headways during the period between 9:00 and 11:00. When headways are short, the service is said to be operating at a high frequency, whereas, if headways are long, service is said to be operating at a low frequency.

Human Services Transportation. Transportation for clients of a specific human or social service agency that is usually limited to a specific trip purpose. Human service agency trips are often provided under contract to a human service agency and may be provided exclusively or ride-shared with other human service agencies or general public transit service.

Intelligent Transportation Systems (ITS). Refers to a broad range of communications-based information and electronic technologies. When integrated into the transportation system's infrastructure and into vehicles themselves,

these technologies can relieve congestion, improve safety, and enhance productivity. ITS is made up of 16 types of technology-based systems, divided into intelligent infrastructure systems and intelligent vehicle systems.

Intercity Transit. Long-distance service provided between cities, often as part of a large network of intercity bus operators and/or passenger train services. Both express and local bus service may be provided. The Greyhound system is an example of a national intercity bus network. Oregon's POINT service is an example of a statewide intercity network.

Load Factor. The ratio of number of riders on board to the maximum number of riders that could be on board.

Metropolitan Planning Organization (MPO). The organizational entity designated by law with lead responsibility for developing transportation plans and programs for urbanized areas of 50,000 or more in population. MPOs are established by agreement of the governor and units of general purpose local government that together represent 75% of the affected population of an urbanized area.

National Transit Database (NTD). The reporting system managed by FTA that collects financial and operating data from transit providers that are recipients of transportation funds under Section 5311 and 5307. There is a Rural NTD and an Urban NTD.

Operating Costs. The sum of all recurring expenses (e.g., labor, fuel, and administration) associated with the operation and maintenance of a transit system. Excludes capital equipment purchases, loans, depreciation, and leases.

Passenger Load. The number of riders on board a transit vehicle, including seated and standing passengers.

Performance Measure. An indicator of how a particular aspect of transit service is being provided.

Performance Measurement Program. A set of processes for selecting, calculating, evaluating,

and refining performance measures and targets. It also includes processes for communicating the results of performance assessments and integrating the information into decision-making. It facilitates tracking changes in performance over time.

Performance Target. A numeric threshold that defines whether or not a given aspect of transit service is being provided at the desired level. Targets can be established based on goals, current performance, industry standards, and/or peer data.

Provider. For the purposes of this guidebook, a generic term for all entities that provide public transit services. The assumption is that all providers have legal standing to provide the service, coordinate their planning efforts with local and state governments, and receive state and/or federal funding for transit programs. Providers can be non-profits, for-profits, public or private service providers, special districts, or departments of cities, counties, and tribes.

Regional Transit. Long bus or rail transit lines with few stations and high operating speeds. Regional transit primarily serves long trips within metropolitan regions, as distinguished from intercity transit service and local transit service.

Reliability. Refers to the predictability and consistency of transit system performance (e.g., whether vehicles consistently arrive at a rider's originating stop and destination at the scheduled times).

Ridership. The number of people making one-way trips on a public transit system in a given time period.

Scenario. For the purposes of this guidebook, a scenario is a potential funding situation (e.g., no increase in current funding levels).

Service Span. The number of hours during the day between the start and end of service on a transit route. Can be calculated such that only times when service is provided at least hourly are included.

A

Title VI. A title of the Civil Rights Act of 1964 that ensures that no person in the U.S. will be discriminated against on the basis of race, color, or national origin. The transportation planning regulations, issued in October 1993, require that metropolitan transportation planning processes be consistent with Title VI. Additionally, recipients of federal transit funding must submit a Title VI Program every three years to demonstrate Title VI compliance.

Transit District. A geographical or political division created specifically for the single purpose of providing public transportation services. It is a separate legal entity and usually possesses the authority to impose a property tax. Transit agencies can directly operate transit service or contract out all or part of the total transit service provided. Such political divisions may also be known as a transit agency or transit authority.

Transit Master Plan. Another name for a TDP.

Transportation-Disadvantaged. Refers to those without access to a private vehicle, which may include the poor, older adults, youth, and people with limited English proficiency or disabilities who are at a significant disadvantage without access to convenient, safe, well-integrated transportation alternatives.

Transportation Options Plan. A plan prepared by ODOT in 2015 to provide guidance for enhancing and expanding transportation choices at the local, regional, and statewide level.

Trip Generator. A place that creates a demand for frequent travel. Trip generators may be origins or destinations.

ACRONYMS

ACS	American Community Survey
APC	Automatic passenger counter
AVL	Automatic vehicle location
BRT	Bus rapid transit
COA	Comprehensive Operations Analysis

CTAA	Community Transportation Association of America
DRT	Demand-responsive transit
FDOT	Florida Department of Transportation
FTA	Federal Transit Administration
FTIS	Florida Transit Information System
GTFS	General Transit Feed Specification
HSCTP	Human Services Coordinated Transportation Plan
LEHD	Longitudinal Employer-Household Dynamics
LRT	Light rail transit
NTD	National Transit Database
ODOT	Oregon Department of Transportation
OPTP	Oregon Public Transportation Plan
OTC	Oregon Transportation Commission
RTAP	Rural Transit Assistance Program
RTC	Regional Transit Coordinator (ODOT)
RPTTAP	Rural Passenger Transportation Technical Assistance Program
STIF	Statewide Transportation Improvement Fund
TAM	Transit Asset Management
TCQSM	Transit Capacity & Quality of Service Manual (TCRP Report 165)
TDP	Transit Development Plan
TDM	Transportation Demand Management
TGM	Transportation Growth Management
TNC	Transportation Network Company
TPTTAP	Tribal Passenger Transportation Technical Assistance Program
TSP	Transportation System Plan

TRANSIT PLANNING CONCEPTS PRIMER

This appendix includes background information on selected transit planning topics for informational purposes. Most of the information in this appendix has been excerpted and adapted from Chapters 2 and 4 of the 3rd Edition of the *Transit Capacity and Quality of Service Manual* (TCQSM) and from Jarrett Walker + Associates. For more information, please see:

- the TCQSM
- *Human Transit: How Clearer Thinking about Public Transit Can Enrich Our Communities and Our Lives*, 3rd Edition (Jarrett Walker, http://humantransit.org/book, 2011)
- Appendix B of Transit Cooperative Research Program (TCRP) Report 183 (*A Guidebook on Transit-Supportive Roadway Strategies*)

TYPES OF TRANSIT USERS

Passengers who have more than one travel option available to them are often referred to as choice riders. These customers may choose transit for a given trip for a variety of reasons, including the following:

- Saving money (e.g., parking costs, fuel costs, tolls, insurance and automobile registration costs)
- Having the potential for a faster or more reliable trip compared to competing modes, particularly in large metropolitan areas and where natural barriers constrain the roadway network
- Avoiding the need to drive in congested roadway conditions
- Being able to use travel time more effectively (e.g., reading and working)
- Helping the environment by not contributing to the negative impacts of automobile travel

Choice riders use transit particularly during peak periods for work trips.

Transit also provides basic mobility for those segments of the population too young, too old, or otherwise unable to drive due to physical, mental, or financial disadvantages. This portion of the population depends on others to transport them (e.g., in autos, in taxis, or on transit), makes trips by walking or bicycling, or uses a combination of these. Such transit users are often called captive or transit-dependent riders.

TRANSIT MODES

BUS TRANSIT

The bus is the most commonly used form of public transport in North America. Bus service can be provided by vehicle types ranging from minibuses to articulated and double-deck buses, allowing the type of bus used to be matched to the type and quality of service desired and the required capacity. Diesel fuel has historically been the most common power source for transit buses in the US, but use of alternative fuels is increasing. Low-floor buses, which allow easier boarding for all passengers by eliminating the need for steps and wheelchair lifts, are now the predominant type of bus used in transit service.

Bus sub-modes include the following:

- Electric trolleybus (rubber-tired vehicles powered by overhead wires, such as in Seattle and San Francisco)
- Commuter bus (bus service that provides at least 5 miles of service, typically connecting outlying areas to a limited number of central city stops and typically using motor coaches)
- Bus rapid transit (BRT; fast, high-capacity bus service that provides many features similar to rail service, which might include

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having a unique name and look, operating on fixed guideways, having large transit stations, and operating at headways of 10 minutes or less during peak periods)

DEMAND-RESPONSIVE TRANSIT

Demand-responsive transit (DRT) is a form of public transportation characterized by flexible routing and scheduling of small- to medium-size vehicles operating in shared-ride mode between pick-up and drop-off locations according to passengers' needs. DRT and its related flexible services (which might mix DRT and fixed-route bus service features) share the common element of a trip reservation. The reservation may be made once when an individual books the initial trip (for subscription service), each time an individual requests a trip (e.g., dial-a-ride), or while on board a vehicle when requesting a specific destination (e.g., route deviation service). A passenger's personal request for a reservation or service consideration is one of the characteristics that make DRT and its variants distinct from traditional fixed-route, fixed-schedule service.

DRT sub-modes include the following:

- General public DRT (available to all)
- Limited eligibility DRT (available only to specific rider groups, such as the elderly)
- ADA paratransit (service required under the Americans with Disabilities Act (ADA) in areas where fixed-route bus service is provided, and which must be comparable to the level of fixed-route service provided)
- Human service transportation (service typically provided by human service agencies for specific rider groups, such as lower-income residents)
- Jitney (privately owned cars or vans that operate on fixed routes without fixed schedules or stops, and which are prohibited in many US cities)

VANPOOL

Vanpools provide shared rides in vans or buses between homes or a central location (such as a park-and-ride lot) to a regular destination. The same group of riders uses the vehicle each day. Driving duties may be assigned to one of the riders (possibly in exchange for a reduced or eliminated fare or limited after-hours use of the vehicle) or rotated among the riders. Vans used in public transit service are typically owned by the public transit agency and riders are charged a weekly or monthly fare, sometimes on the basis of the number of vanpool participants relative to the van's seating capacity.

RAIL TRANSIT

Rail transit modes carry billions of passengers in North America each year. Major rail modes are heavy rail, light rail, commuter rail, and automated guideway transit (AGT). Minor rail modes include monorails, funicular railways, aerial ropeways, and cable cars.

Rail sub-modes include the following:

- Heavy rail (characterized by fully grade-separated rights-of-way, high-level platforms, and high-speed, electric multiple-unit cars)
- Light rail transit (LRT; characterized by single- or multi-car trains that can operate in separated rights-of-way or mixed traffic, and includes streetcars and vintage trolleys)
- Commuter rail (passenger trains that typically operate on the general railroad system and provide long-distance trips primarily during peak commuting hours)
- AGT (driverless transit service that operates fully grade-separated; often found in airports and sometimes called people-movers)
- Monorail (characterized by vehicles that straddle or are suspended from a single rail; classified as AGT when driverless)
- Funicular railways (used to carry riders up and down steep hillsides; also known as inclined planes)

- Aerial ropeways (characterized by units called carriers that cover distances while suspended from an aerial cable; includes aerial tramways, aerial lifts, and funitels)

- Cable car (characterized by cars that are pulled along by continuous underground cables)

FERRY TRANSIT

Ferry transit provides a water connection between or among points where land routes are interrupted by water, and it effectively forms part of the longer land route. Ferry services play a role in the transit systems of a number of North American cities, providing pedestrian, bicycle, and—in some cases—vehicle transport across waterways where transportation connections are desirable but conditions do not justify a bridge or

tunnel, or where alternative bridges and tunnels are congested. They also operate in coastal areas and in rural areas where traffic volumes do not justify bridge construction.

Ferry sub-modes include the following:

- Point-to-point services
- Linear multiple-stop services
- Circulators
- Water taxis

TRANSIT OPERATING ENVIRONMENTS

Operating environments are the rights-of-way in which transit modes function. The operating environment affects transit capacity, speed, and reliability.

Operating environments include the following:

- Mixed traffic (shared lane operation with general traffic)

- Semi-exclusive (a lane partially reserved for transit use but also available for other uses at certain times or in certain locations)

- Exclusive (a lane, other portion of a

roadway, or right-of-way reserved for transit use at all times, but still subject to external traffic interference at intersections or other grade crossings)

- Grade separated (a facility dedicated to the exclusive use of transit vehicles, without at-grade crossings)

TRANSIT SERVICE PATTERNS

FIXED-ROUTE

Fixed-route services are provided along a designated route and are operated at set times or headways. There are different types of stopping patterns and route network designs associated with fixed-route service, and these have impacts on passenger quality of service.

Stopping patterns include the following, as illustrated in **Figure B-1:**

- Local (serves all stops along the route, emphasizing transit access over speed)

- Limited-stop (balances access with speed by serving only high-ridership stops, transfer points, etc.)

- Express (emphasizes speed over access by serving stops only at the endpoints of a route and operating non-stop over the majority of the route)

Route network designs include the following:

- Trunk-and-branch (the bus or rail facility supports several transit lines on the inner portion of the facility and individual lines branch off to serve more localized market areas; the trunk portion provides a higher effective frequency than could be supported by an individual line within the corridor)

- Feeder (local transit routes carry passengers to a corridor served by a high-frequency transit line; transfers between the feeder and high-frequency services are required)

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System designs include the following, as illustrated in **Figure B-2:**

a. Radial network (all routes serve a downtown area; travel between non-downtown origins and destinations could require out-of-direction travel and a downtown transfer)

b. Hybrid network (crosstown routes connecting selected major non-downtown origins and destinations are overlaid on a radial network)

c. Hub-and-spoke network (local transit routes converge at transfer centers, and other routes connect the transfer centers to each other and to the downtown; can provide more direct connections than a radial network but transfers must be timed and transit vehicles must stay on schedule)

d. Grid network (provides frequent service on major streets and typically covers much of the service area; many trips will require a transfer)

Fixed-Route System Design Considerations

In very small towns or in regions where all of the transit markets are arranged in a linear pattern, designing the transit network may be a fairly straightforward exercise. However, even in these situations, and certainly in larger or more complicated service areas, some basic challenges may arise. These include the following:

- Deciding whether to offer an everywhere-to-everywhere network that does not ask people to transfer or a connective network with higher frequencies

- Deciding how to get fixed routes close to major destinations while still offering linear service

- Deciding whether and how to connect with other transit services (such as a neighboring provider's transit system)

- Deciding where and what type of demand-responsive service to offer, and what timed connections (if any) it should make with other transit services

If a decision has been made about whether the network should maximize ridership, maximize coverage, or balance them in a particular way, that helps with this design task, because some of the answers to these questions generally track with one purpose or the other. For example, if the purpose of the network or a particular route is high ridership, then linearity will often be more important than deviating to a particular place—but it will depend on how much ridership that place generates and how much the deviation costs.

One way to approach network design is with a group of people, around a table, drawing and debating ideas. Helpful tools for such an exercise include the following:

- Large-scale color maps, transparencies, and dry-erase markers, allowing for quick drawing and revising and for production of multiple drafts

- Tools such as Google Maps and Streetview on a projector, for looking up local streets, intersections, and stops

- Tools such as Remix, which allows users to draw routes, set frequencies and spans, and get operating cost estimates

FIGURE B-1 – STOPPING PATTERNS
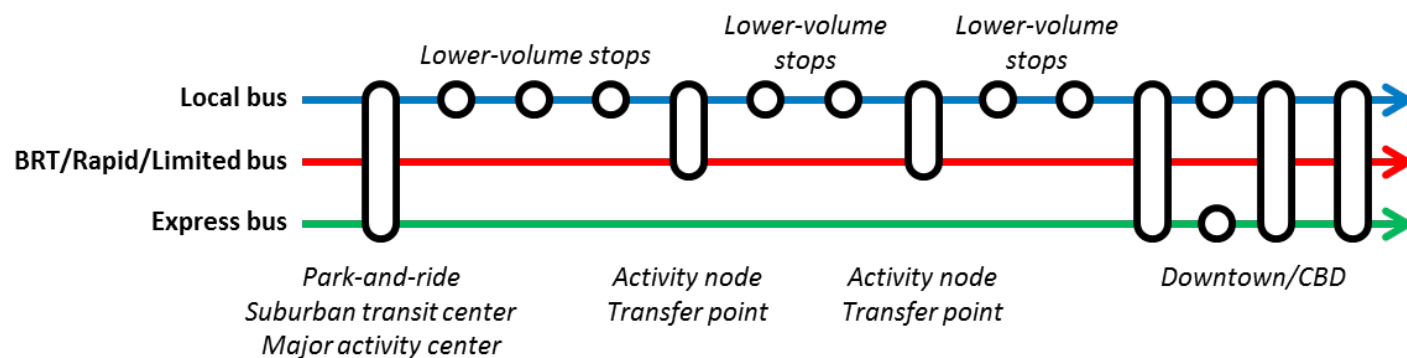
Source: TCQSM, 3rd Edition

FIGURE B-2 – FIXED-ROUTE NETWORKS

(a) Radial

(b) Hybrid

(c) Hub-and-spoke

(d) Grid
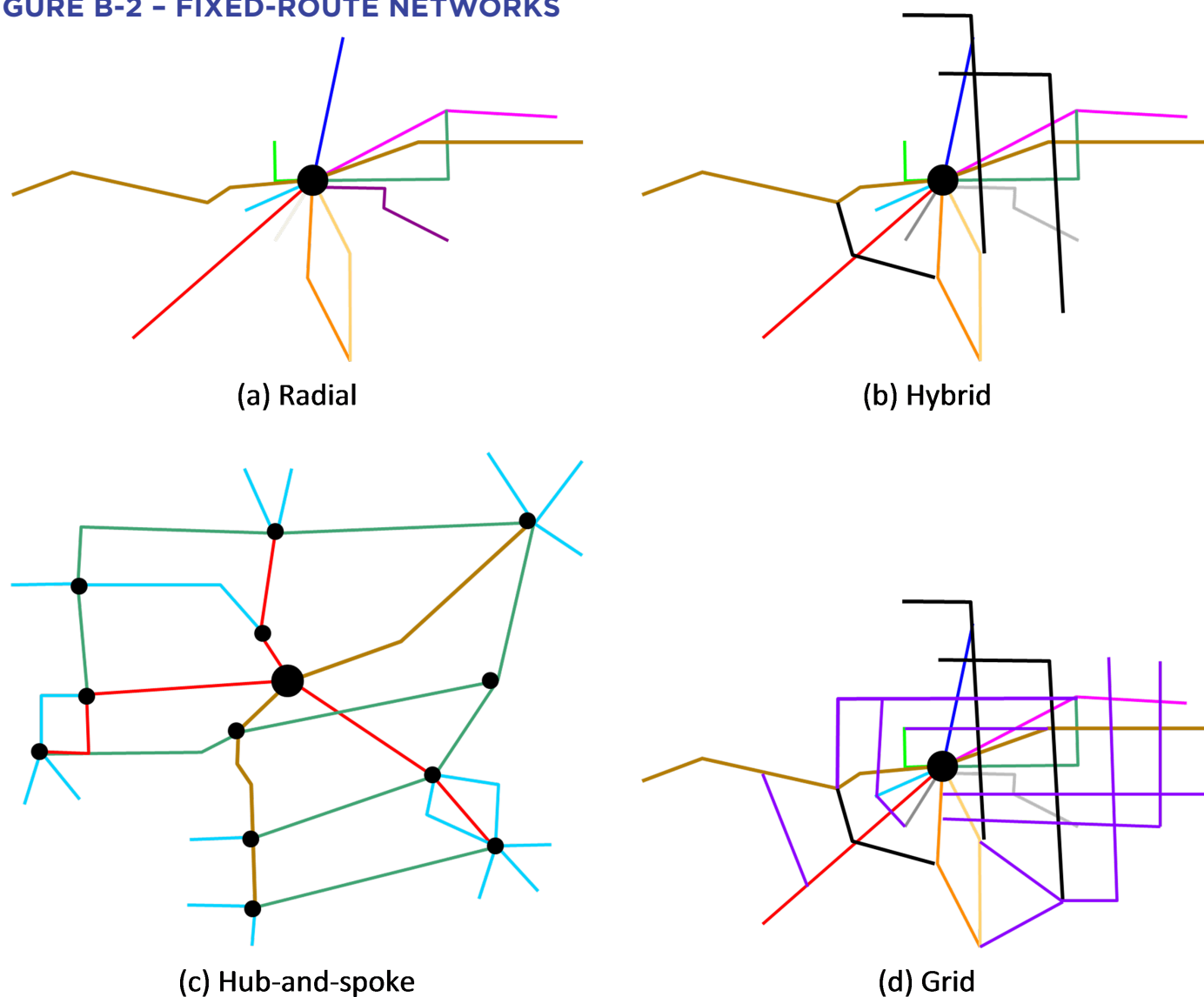
Source: TCQSM, 3rd Edition

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DEMAND-RESPONSIVE

DRT service can be operated using a variety of trip patterns as illustrated in **Figure B-3**, including many origins to many destinations, many origins to few destinations, few origins to many destinations, few origins to few destinations, and many origins to one destination.

Other DRT variants build on the inherent flexibility of DRT but include elements of more traditional fixed-route and fixed-schedule transit to increase productivity. These are called flexible transit services and often operate in lower-density areas. Flexible transit services include the following:

- DRT connector/feeder service (provides demand-responsive service within a defined zone that has one or more scheduled transfer points to fixed-route transit; designed primarily to offer connections to the fixed-route network but also provides local transportation in the defined zone)

- Zone routes (combine demand-responsive service within defined zones along a corridor with scheduled departure and arrival times at one or more endpoints)

- Point deviation (operates within a defined area or zone, providing demand-responsive service as well as scheduled service to a limited number of designated stops, without any regular route between)

- Route deviation (vehicles operate along a regular route, with or without marked bus stops, and deviate off that route to serve demand-responsive trips within a zone around the route; also called flex-route service)

- Flexible route segments (service is predominately fixed-route service but converts to DRT for a limited and defined segment of the route)

- Request stop (predominately traditional fixed-route/fixed-schedule service but which also provides service to a limited number of defined stops close by the route at the request of a passenger)

Demand-Responsive System Design Considerations

For rural transit providers, the entire transit service area may be a demand-responsive zone. Providers that serve one or several larger towns might use a mix of fixed routes, demand-responsive connectors to those routes, and demand-responsive zones.

Information about how rural transit agencies plan and operate demand-responsive services is available in TCRP Report 140 (A Guide for Planning and Operating Flexible Public Transportation Services). TCRP Report 140 offers a decision guide for what type of services tend to be most successful at serving different markets under different conditions.

TCRP Report 116 (Guidebook for Evaluating, Selecting, and Implementing Suburban Transit Services) provides case study examples of many of these DRT service types and information about their performance.

Transfer Considerations

Ample transfer activity can happen outside of transit centers. Two or more routes crossing at an intersection creates a transfer point if pedestrian crossings and sidewalks are adequate and if the services are scheduled such that it is possible to safely complete the transfer in time.

A transfer becomes more onerous if the stops are located away from the intersection. This typically happens if an agency (sometimes even the transit provider) objects to having a bus stop close to the intersection. It can also happen if driveways are located next to the intersection. The result is that a transfer between two intersecting routes at an intersection can be turned into a fairly long walk.

FIGURE B-3 – DRT SERVICE PATTERNS
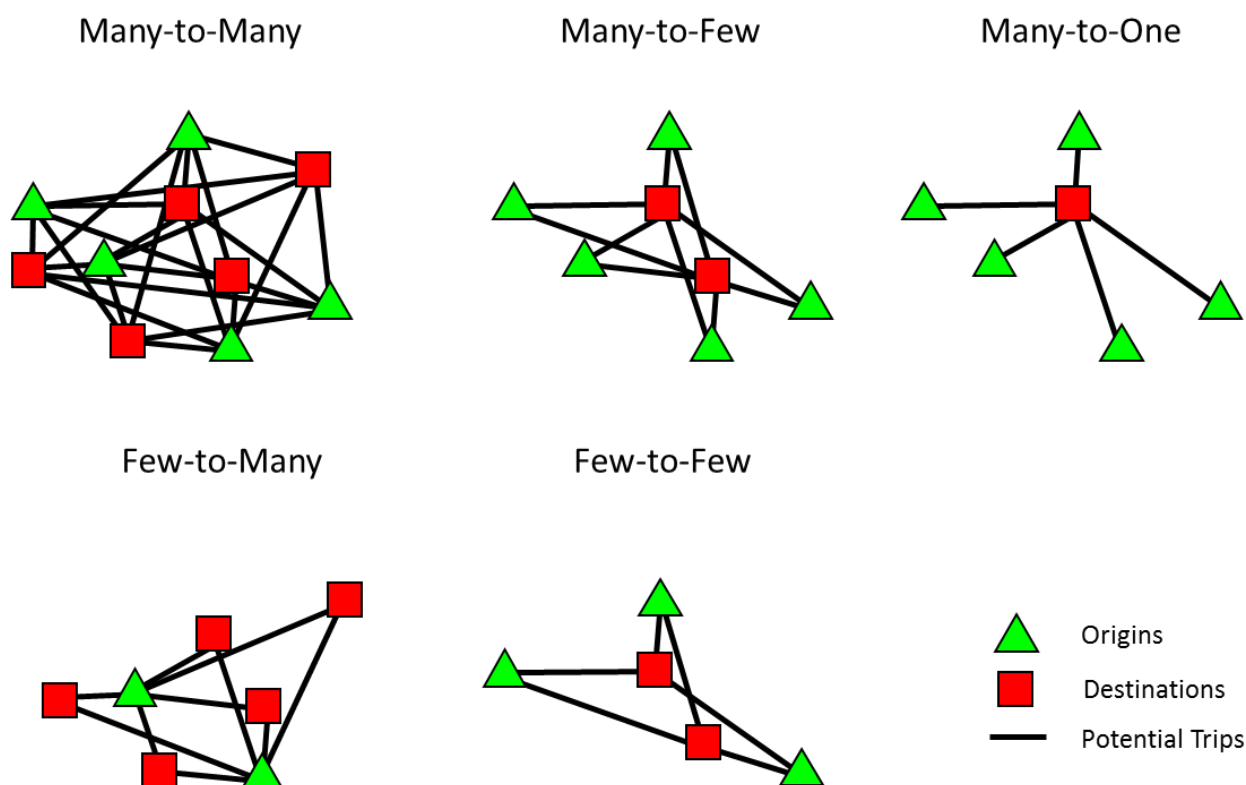
Source: TCQSM, 3rd Edition

TRANSIT STOPS, STATIONS, AND CENTERS

A TDP can define the precise locations of stops or can define policies guiding the spacing and placement of stops and leave precise location decisions to staff during implementation. Policies governing stop locations and the amenities provided at stops might address the following topics:

- The minimum number of daily boardings at a stop
- The average wait time at a stop
- The average wait time at a stop multiplied by the number of daily boardings there
- The presence of people with special needs for seating or shelter (such as the elderly) near a stop
- The willingness of another organization to sponsor either the capital cost or the maintenance of a stop

Vehicle Maintenance Considerations

One of the decisions a transit agency has to make in planning for future maintenance and facilities is whether to contract service out to a private company or operate and maintain it in house. If an agency decides to do maintenance in house, a forecast of storage and maintenance facility needs can be based on the future size of the fleet and the type of vehicles in the fleet.

Vehicle storage (i.e., overnight parking) decisions should consider not only the size of the fleet but also deadheading costs between the site and the routes served by the site. Land closer to developed areas is generally more expensive but may also be closer to where routes begin and end, saving on operating costs in the long term.

Vehicle maintenance generally tracks with vehicle age and vehicle miles rather than vehicle hours. It also tracks with wear and tear on vehicles from rough roads, freezing conditions, and wheelchair ramp deployments.

General guidance on the size, design, and cost of maintenance facilities is included in the Transit in Small Cities Primer.

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Transit centers should be located at places in the network where multiple routes naturally converge. This may happen at an activity center (like a regional mall) or at a chokepoint (like a bridge or a railroad crossing). Developing a transit center at a natural convergence point allows people to transfer between lines with minimal out-of-direction travel.

Guidance for the design of transit centers and park-and-ride lots is available in the Transit in Small Cities Primer.

TRANSIT VEHICLES

The size of the transit fleet that needs to be purchased, stored, and maintained is dictated by the number of vehicles that are needed to support peak period operations. The fleet must also include backup vehicles in case other vehicles need to come out of service for repairs. Most providers retire older vehicles into backup roles, if they are still in good repair.

For small transit systems, one of the biggest unavoidable capital needs is often the purchase of one or more vehicles. As maintenance costs of an aging fleet increase, or as the features of the vehicles become obsolete, the need to replace vehicles becomes more urgent.

TRANSIT QUALITY OF SERVICE CONCEPTS

DEFINITION

Quality of service reflects the passenger's perception of transit performance. The performance measures used to describe this perception are different from the financial and output-focused performance measures typically reported by transit agencies to the National Transit Database (NTD). Quality of service depends to a great extent on the operating decisions made by a transit provider within the constraints of its budget, particularly decisions on where transit service should be provided, how often and how long it is provided, and how it is provided.

Ultimately, quality of service reflects how well transit service meets the needs of its customers, which has ridership implications. However, a balance must be struck between the quality of service that passengers ideally would like and the quality of service that a transit provider (a) can afford to provide or (b) would reasonably provide, given a base demand for transit service. Better quality of service is more attractive to

potential passengers and generates higher ridership than lower quality of service, but better quality of service often (but not always) also entails higher costs for the provider.

COMPONENTS

Geographic Availability

The presence or absence of transit service near a potential passenger's origin and destination is a key factor in their choice to use transit. Ideally, transit service will be provided within a reasonable walking distance of a person's origin and destination. Alternatively, demand-responsive service will be available at the doorstep for those unable to use fixed-route service. The presence of accessible transit stops, as well as accessible routes to transit stops, is a necessity for many persons with disabilities who wish to use fixed-route transit.

Time Availability

How often transit service is provided and when it is provided during the day are important factors in a potential passenger's decision to use transit. The more frequent the service, the shorter the wait time when a bus or train is missed or when the exact schedule is not known, and the greater the flexibility that customers have in selecting travel times. The number of hours during the day when service is available (service span) is also highly important: if service is not provided at the times a person wants to travel, transit will not be an option for that trip. These two factors in combination determine the time (or temporal) availability of transit service.

Information Availability

Passengers need to know how to use transit service, where to go to access it, how to pay their fare, where to get off near their destination, whether any transfers are required, and when transit services are scheduled to depart and arrive. Without this information, potential passengers will not be able to use transit service, even though it would otherwise be an option for their trip. Visitors to an area and infrequent transit users (e.g., people who use transit when their car is being serviced) particularly need this information, but they can be the most difficult people to get information to.

Capacity

Insufficient capacity can impact transit service availability.
If a bus or train is full when it arrives at a stop, transit service is not available at that time to the people waiting there. The effective service frequency for these passengers is reduced from what is implied by the schedule, as they are forced to wait for the next vehicle or find another means of making their trip. Lack of available securement space, a nonfunctional wheelchair lift, or a non-functional station elevator will impact fixed-route service availability for persons with disabilities.

In demand-responsive service, capacity constraints take the form of service denials, where a trip cannot be provided at the requested time, even though service is operated at that time.

Passenger Loading

Transit is less attractive when passengers must stand for long periods of time, especially when transit vehicles are very crowded. When passengers have to stand, it becomes more difficult for them to use their travel time productively, which eliminates a potential advantage of transit over the private automobile. Crowded vehicles also slow down transit operations, as it takes more time for passengers to get on and off.

Many transit agencies assess the degree of passenger crowding on a transit vehicle based on a design load or occupancy for the vehicle. This load, which may vary by time of day, reflects a compromise between passenger comfort and moving as many passengers as possible with the least number of vehicles. The design load is typically determined by the number of available seats, plus an assumed number of standing passengers.

Reliability

Reliability affects the amount of time passengers must wait at a transit stop for a transit vehicle to arrive, as well as the consistency of a passenger's arrival time at a destination from day to day. Reliability also affects a passenger's total trip time: if people believe a transit vehicle may depart early, they may arrive earlier than they would otherwise to ensure not missing the bus or train. Similarly, if passengers are not confident of arriving at their destination on time, they may choose an earlier departure than they would otherwise, to ensure that they arrive on time, even if it means arriving much earlier than desired.

Reliability encompasses both on-time performance and the regularity of headways between successive transit vehicles. Uneven headways result in uneven passenger loadings, with a late transit vehicle picking up not only its regular passengers but those passengers that have arrived early for the following vehicle, with the result that the vehicle falls farther and farther behind schedule and more passengers must stand. In contrast, the vehicles following will have lighter-than-normal passenger loads and will tend to run ahead of schedule.

Table B-1 lists common factors that influence transit service reliability.

Travel Time and Transfers

Passengers' travel time is an important convenience factor, and different portions of a trip may seem to pass more slowly or be more onerous than time spent in a transit vehicle. Total trip time includes access time from the trip origin to a transit stop or station, waiting time

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for a transit vehicle, travel time on board the vehicle, possibly transfer time and additional in-vehicle time, and walking time from a transit stop or station to the destination. Because it is not possible to provide a one-seat trip between every possible combination of origin and destination, except in the smallest communities, transfers are often a necessary part of a transit trip. Transfers increase the possibility that a missed connection will occur, which would lengthen a passenger's trip by the amount of one headway on the connecting line.

Transfers can also increase the complexity of a transit trip for first-time passengers.

Safety and Security

Riders' perceptions of the safety and security of transit, as well as actual conditions, enter into the mode choice decision. Safety involves the potential for being injured while using transit (e.g., crashes, slips and falls). Security involves the potential for becoming the victim of a crime while using transit. It also covers irritants, such as encountering unruly passengers or having to listen to someone else's music, that may not be an actual threat but nevertheless makes passengers uneasy that the system's code of conduct is not being enforced.

Security at transit stops can be improved by placing stops in well-lit areas and by having well-marked emergency phones or help points available. Passengers may also feel more comfortable when other passengers are around.

Cost

Potential passengers weigh the cost and value of using transit against the out-of-pocket costs and value of using other modes. Out-of-pocket transit costs consist of the cost of the fare for each trip or the cost of a monthly pass (and possibly the cost of parking at a station), while out-of-pocket automobile costs include road and bridge tolls and parking charges. Other automobile costs, such as fuel, maintenance, insurance, taxes, and the cost of buying an automobile generally do not occur for individual trips and thus usually do not enter into a person's consideration for a particular trip.

Appearance and Comfort

Clean, attractive transit stops, stations, and vehicles improve transit's image, even among non-riders. For example, the presence of shelters can help non-users become aware of the existence of transit service in areas they normally travel through in their automobiles. On the other hand, a dirty or vandalized shelter or vehicle can raise questions in the minds of non-users about the comfort and quality of transit service, and about other aspects of the service, such as maintenance, that may not be as obvious.

Passengers are also interested in personal comfort while using transit, including appropriate climate control for local conditions, seat comfort, and ride comfort (e.g., vehicle sway and vehicle noise). Ride comfort is particularly important for older passengers and persons with disabilities.

Many elements of transit infrastructure help make transit comfortable for passengers and make transit more competitive with the automobile. This infrastructure is often referred to as amenities. Amenities include benches, shelters, lighting, informational signing, trash receptacles, telephones, vending facilities, and climate control.

Customer Relations

Transit agency staff are the public face of the agency, and driver friendliness or helpfulness frequently appears in surveys as an important customer satisfaction factor. Helpful staff can help offset some the effects of poor service quality, while staff with poor attitudes can damage the impression of the transit agency with both passengers and the public at large.

RIDERSHIP ESTIMATION

Table B-2 summarizes techniques for estimating ridership. This is not an exhaustive list of techniques.

TABLE B-1 – FACTORS INFLUENCING TRANSIT RELIABILITY

Traffic conditions	Evenness of passenger demand
Road construction and track maintenance	Difference in operator driving skills and route familiarity
Vehicle and maintenance quality	Wheelchair lift and ramp usage
Vehicle and staff availability	Environmental conditions
Transit preferential treatments (such as transit signal priority and exclusive transit lanes)	Route length and number of stops
Schedule achievability	Operations control strategies
Line merges (on rail systems)	

Source: TCQSM, 3rd Edition

TABLE B-2 – METHODOLOGIES FOR ESTIMATING TRANSIT RIDERSHIP

METHODOLOGY	DESCRIPTION	APPLICATION	DATA & RESOURCE NEEDS
Model Approach #1 Can the current system accommodate the projected increase in demand?	Assume ridership per capita will remain constant as the service area population grows. Distinguish between fixed-route and paratransit markets as desired. Use ridership-based performance measures to determine if the current system can accommodate the projected increase in demand. If not, identify potentially needed improvements.	Useful for estimating future ridership systemwide Applicable to rural, small urban, and large urban areas	Low
Model Approach #2 Grow route-level ridership in proportion to population growth. Do routes have the capacity to accommodate future growth?	Grow route-level ridership using the growth factor derived from Model Approach #1. Estimate route capacity; the TCQSM can be used for this. Do routes have the capacity to accommodate estimated growth? If not, identify potential needed improvements.	Useful for estimating future ridership on a specific fixed route, assuming service levels on the route remain unchanged. Can be used in combination with the Elasticity Factors approach below. Applicable to rural, small urban, and large urban areas	Medium

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METHODOLOGY	DESCRIPTION	APPLICATION	DATA & RESOURCE NEEDS
Elasticity Factors Estimate the impact of service changes on route-level ridership. How will route-level ridership change if fares, frequency, reliability, service coverage, and/or travel times are changed?	An elasticity factor relates the observed percentage change in ridership to the percentage change in some other factor (e.g., fares). Chapter 4 of the *Bus Rapid Transit Practitioner's Guide* (TCRP Report 118) provides a detailed discussion of elasticities that is applicable to all fixed-route transit modes. The Guide also cites the following equation as one commonly used to estimate ridership changes: $$R_2 = \frac{(E\text{-}1)X_1R_1 - (E\text{+}1)X_2R_1}{(E\text{-}1)X_2 - (E\text{+}1)X_1}$$ where: E = elasticity R_1 = base ridership R_2 = estimated future ridership X_1 = quantity of base attribute (such as travel time or frequency) X_2 = quantity of future attribute Chapter 4 of the TCQSM, 3rd Edition, provides guidance for selecting specific elasticity factors (E in the equation above).	Useful for estimating increases or decreases in route-level ridership resulting from a change in fare or service levels. Can be used in combination with Model Approach #2 above.	Medium

METHODOLOGY	DESCRIPTION	APPLICATION	DATA & RESOURCE NEEDS
TCRP Report 161 Method Does transit service meet travel needs in rural and small urban areas?	TCRP Report 161 provides methodologies for estimating transit need and transit demand in non-urban areas. In the report, "need" is an estimate of the potential number of people who could be served by public transportation so they would be able to make trips as frequently as people who have access to private vehicles. "Demand" in the report is an estimate of the potential number of people who would actually use a non-urban public transportation service if one is provided. The methodology uses Census data. Note that the report suggests that peer comparison is a highly desirable approach to estimating rural passenger transportation demand.	Useful for estimating future ridership systemwide Applicable to rural and small urban areas	Low
TCRP J-11 Task 8 Method Does transit meet the travel needs of seniors?	TCRP Project J-11, Task 8, produced a report that includes a methodology for forecasting trips occurring on paratransit modes, through volunteer driver programs, and on community bus service. It focuses on seniors.	Useful for estimating future ridership systemwide for seniors Applicable to rural and small urban areas	Low
Transit-Supportive Area Analysis Is minimum hourly fixed-route service provided to areas that can support it? Are there areas where a higher level of transit service is justified?	Using Table 2-1 or similar data, assess the future transit-supportiveness of sub-areas within the region. Using forecast population densities (for example), identify locations where new transit service and connections might be introduced and what level of transit service might be appropriate in those circumstances. These new transit services and connections are potential needs. To estimate the ridership impact of the new services use the Elasticity Factors approach (above) or assume initially that the demand for the new services will be equivalent on a riders/mile basis to that of similar existing services in the region or in peer transit services.	Useful for estimating ridership in sub-areas and corridors Applicable to rural, small urban, and large urban areas	Medium

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METHODOLOGY	DESCRIPTION	APPLICATION	DATA & RESOURCE NEEDS
Transit Planning Tools Can the current system accommodate future needs?	Use the regional travel demand model or software tools such as STOPS, TBEST, and Remix to identify future needs.	Useful for estimating ridership systemwide or in corridors Applicable to rural, small urban, and large urban areas	High

EXAMPLE TDP OUTLINE

This appendix contains an example outline of a transit development plan (TDP). The outline is organized around the chapters of a TDP final report. It does not include all activities described in this guidebook, but providers with smaller budgets may nevertheless not be able to accomplish all the activities reflected in it.

1.0 TDP Context

1.1 TDP Purpose

1.2 History of Transit in the Community

1.3 Transit Provider Funding & Governance Structure

1.4 Partnerships

1.5 Related Plans & Programs

 1.5.1 Transportation System Plan

 1.5.2 Comprehensive Plan

 1.5.3 Human Services Coordinated Plan

 1.5.4 Land Development Code

 1.5.5 Local Government Vision

 1.5.6 Local Master Plans

2.0 Stakeholder Involvement

2.1 Public Involvement Framework

 2.1.1 Public Advisory Committee

 2.1.2 TDP Web Site

 2.1.3 On-Board Survey

 2.1.4 Online Survey

 2.1.5 Open Houses

 2.1.6 Presentations at Community Meetings/Events

 2.1.7 Information Displays

 2.1.8 Stakeholder Interviews

 2.1.9 Mail-outs (paper and/or email)

2.2 Agency Involvement Framework

 2.2.1 Technical Advisory Committee

 2.2.2 Stakeholder Interviews

 2.2.3 Presentations at Board and Committee Meetings

3.0 Vision and Goals

3.1 Transit Vision

3.2 Transit Goals

3.3 Performance Measures

REPRESENTATIVE PERFORMANCE MEASURES:

- ✔ **Annual boardings per capita (mobility)**
- ✔ **Revenue miles between service disruptions (service reliability)**
- ✔ **Average fleet age (passenger comfort and service reliability)**
- ✔ **Average vehicle miles per gallon (fuel economy)**
- ✔ **Boardings per revenue hour (productivity)**
- ✔ **Farebox recovery ratio (cost-effectiveness)**
- ✔ **Operating cost per revenue hour (efficiency)**
- ✔ **Percent of bus stops accessible in the Americans with Disabilities Act sense of accessibility**
- ✔ **On-time performance (reliability)**
- ✔ **Revenue miles per revenue hour (average speed)**
- ✔ **CO_2 emissions per mile (environment)**
- ✔ **Crashes per thousand miles of revenue service (safety)**

This list shows an illustrative "core" set of performance measures. Providers should choose performance measures that speak to their vision and goals and the purpose of their TDP. Smaller providers might include fewer measures (e.g., the first eight measures in the list).

4.0   Baseline Conditions

4.1   Demographics

4.1.1   Household Density - Overall

4.1.2   Household Density - By Age

4.1.3   Household Density - By Household Income

4.1.4   Household Density - By Ethnicity

4.1.5   Job Density - Overall

4.1.6   Location of Jobs and Employee Residences

4.2   Land Use & Development Patterns

4.3   Inventory of Transit Services Provided

4.3.1   Fixed-Route Transit Services

4.3.2   Paratransit Services

4.4   Fleet Inventory

5.0   Needs Assessment

5.1   Unconstrained Needs

5.1.1   From Application of Performance Measures to Existing Conditions

5.1.2   From Demand Forecasts

5.1.3   From Stakeholder Input

6.0   Alternatives Development & Evaluation

6.1   Potential Improvements to Address Needs

6.2   Alternatives to Address Big-Picture Needs and Questions (optional)

6.3   Evaluation of Potential Improvements

6.4   Refinement of Improvements and Re-Evaluation (as needed)

6.5   Demand and Fare Revenue Forecasts

7.0   Financial Assessment

7.1   Funding Scenarios (up to three)

7.2   Cost Estimates (for improvements under each scenario)

7.2.1   Unranked (for unconstrained analysis)

7.2.2   Ranked (for financially constrained analysis)

7.3   New Funding Sources (if needed)

REPRESENTATIVE FUNDING SCENARIOS:

- ✔ **No increase in current funding levels (with or without inflation)**
- ✔ **20% increase in funding (could be expressed in service hours instead)**
- ✔ **50% increase in funding (could be expressed in service hours instead)**
- ✔ **$XXX,XXX funding increase due to a specific source that might become available**
- ✔ **Near-term (five-year) and mid-term (10-year) scenarios plus a long-term (20-year, illustrative) scenario**
- ✔ **Decrease in funding (e.g., due to recession impacts on tax receipts)**
- ✔ **Maintenance of current system (which may or may not require increased funding)**

This list of scenarios is illustrative. Providers should choose scenarios that speak to the purpose of their TDP.

8.0   Recommendations & Implementation

8.1   Summary of TDP Recommendations

8.2   Implementation Plan

8.2.1   Implementation Schedules and Phasing

8.2.2   Plan for Evaluating Newly Implemented Improvements

8.2.3   Funding Strategy

8.2.4   Coordination

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Examples of Provider Vision Statements, Goals, and Performance Measures

Salem-Keizer Transit, Sunset Empire Transportation District, Tillamook County Transportation District, and Lane Transit District

Sample TDP Scope of Work

Examples of TDP Public Information Materials

Albany Transit Service, Sunset Empire Transportation District, Columbia Area Transit, City of Corvallis TSP/TDP

Vision

Making a positive difference by enhancing community
livability through innovative, sustainable
regional transportation options

Mission

Connecting people with places through safe, friendly,
and reliable public transportation services

Values

Safety • Service Excellence • Communication • Innovation • Accountability

GOALS

The Salem-Keizer Transit Strategic Plan contains six primary goals. These goals reflect how we will realize and practice our Vision, Mission, and Values. Each goal comprises several objectives and strategies which help guide our work and measure our accomplishments.

GOAL 1

Provide an Exceptional Transportation Experience

We envision an easy, comfortable transit experience -- a system where customers from all communities can quickly and easily purchase fares, board buses, and arrive safely and comfortably at their destination. We see a future where transit agency borders and service boundaries blur; where inter-connected transportation options become apparent and easy for users.

To create this system, we will provide the highest quality transit services possible. We will focus on meeting the needs of our existing customers while continually improving our service to attract new choice riders such as commuters and students.

Objective

Increase use of transportation options

- Increase transportation option awareness
- Implement targeted outreach campaigns

Objective

Enhance customer satisfaction

- Identify baseline customer satisfaction
- Develop a customer satisfaction improvement plan

STRATEGIC PLAN

GOAL 2

Ensure Organizational Viability

We will ensure that our services continue to match community needs. We will continue to develop appropriate resources and funding to sustain operations. We will seek to provide exceptional, essential transportation services today and for years to come. Enhancing community livability with transportation services is a long-term ambition which requires responsible growth and cost-effective operations.

We will ensure our ability to provide services today and in the future by maintaining a balanced budget, by ongoing identification of new revenue sources and opportunities for efficiency, and by providing responsible stewardship of public funds. We will continuously work to assure that our operations are as cost-efficient as possible.

Objective
Maintain fiscal integrity
  • Maintain a balanced, responsible budget

Objective
Build Public Trust
  • Plan and implement a public outreach and communication plan
  • Provide a consistent message

Objective
Improve data management and reporting
  • Implement electronic fare collection
  • Create a data warehouse
  • Enhance performance reporting

GOAL 3

Partner with the Community

We seek relationships with business partners and community neighbors. We will ensure that transportation services are compatible with changes in community growth and development by actively participating in the greater community. We recognize that transportation is complementary to the workplaces, parks, businesses, schools, and people that make a community.

We will work to develop effective, lasting relationships with business, government, and community partners. These relationships, both formal and informal, are the essential building blocks for effective transit growth.

Objective
Develop community partnerships
  • Expand and strengthen partnerships
  • Increase outreach

Objective
Increase involvement in the community
  • Encourage volunteerism and civic involvement
  • Identify sponsorship opportunities

Goal 4
Improve and Promote Environmental Sustainability

We will provide environmentally responsible transportation options to businesses and to the community. We will minimize our own impact to the environment on the road, in our public spaces, and in our work facilities.

We recognize that we are part of a global movement to improve the environmental sustainability of everyday lives. We imagine cities free of congestion and pollution. In the place of gridlock we see modern, fuel efficient vehicles carrying passengers quickly and effectively. We envision communities designed for walking, bicycling, and sustainable living – we see transit connecting the people that live in these communities with the places they work, shop, attend school, and play.

Objective
Provide environmentally sustainable transportation options
- Increase awareness of environmentally sustainable choices
- Research new sustainable methods, vehicles and practices

Objective
Adopt environmentally sustainable business practices
- Develop a culture of environmental responsibility and awareness
- Earn environmental certifications

Goal 5
Be an Employer of Choice

We seek to attract and retain the right mix of talent, skill, ability, and enthusiasm to build a strong, vital, and dynamic team. We will provide environments which develop, support, and engage employees.

We will earn a reputation as a desirable place to work. We will provide an environment that is fair, rewarding, and fun while challenging employees to grow in their careers.

Objective
Attract and retain the right mix of talent, skill, and ability
- Provide a fair compensation plan based on occupation, location, and industry
- Support professional development

Objective
Develop a culture that promotes trust, engagement, productivity, and safety
- Provide clear expectation
- Identify baseline employee engagement
- Improve employee engagement
- Provide and promote the use of current tools and technology

Goal 6

Improve Connectivity

We will work to identify the needs of our community. We will tailor availability, frequency, and service locations to provide the greatest benefit for our community and region. We recognize that origins and destinations often stretch beyond the urban growth boundary; we imagine a future where trips to other communities are easy, quick, and efficient. We envision regular connections throughout Salem, Keizer, and across the mid-Willamette Valley from the coast to the Cascades – these regular connections provide essential access for commerce, education, and leisure.

We will develop local and regional partnerships, seeking to coordinate a broad, diverse transportation network. We will foster and promote opportunities for connectivity with other transportation options. We will provide new destinations for our community, and avenues for others to visit our cities.

Objective

Collaborate with regional partners

- Inventory existing regional services and stakeholders
- Establish regional transit service providers group

Objective

Increase regional access

- Identify gaps in regional connectivity
- Develop coordinated service plans

Objective

Improve existing service

- Perform a comprehensive service analysis
- Update and implement the Strategic Operations Plan

7 GOALS & SERVICE PRINCIPLES

Each community has different goals that affect the provision of transit and other public services. Running every type of transit service throughout Clatsop County is neither financially possible nor desired. Instead, the priorities of the community must be used to decide how important public transit stands in relation to other services and what neighborhoods and markets transit should serve. Establishing service design principles will also help SETD explain service decisions to the public.

> For additional details regarding goals and objectives, see Volume II, Section K.

DEFINITIONS

Goals and objectives are defined as follows:

- **Goals** establish the overall policy direction and organizational philosophy. These are typically value statements.

Objectives offer a means to meeting a goal. They are typically action-oriented strategy statements and should be understandable, specific, attainable, and measurable. Objectives can be met through a variety of actions. For example an objective to reduce transit travel time can be achieve by eliminating route deviations, providing more direct service, traveling on higher speed roads, investing in traffic congestion relief solutions, and/or giving transit a priority at congested intersection.

PROPOSED GOALS AND OBJECTIVES

Based upon public and stakeholder input, as well as feedback from the project advisory committee, the team created a list of service goals and objectives for SETD, shown in Figure 7-1.

Figure 7-1   Goals and Objectives

Goal	Objective	Highest Priority (Public Input)
1. Efficiency: Provide cost-effective public transportation[2]	A. Match service types to appropriate land use densities	
	B. Increase efficiency of transit services	#6
	C. Maintain efficient cost per service hour	
2. Mobility: Serve a wide range of mobility needs within budget constraints[2,4]	A. Provide service all day covering peak times for multiple job sectors.	#1
	B. Increase service on corridor segments serving local businesses	
	C. Accommodate seasonal demand with increased hours to serve nighttime travel	
	D. Provide weekend service covering major trip generators	#5
	E. Coordinate services with intercity providers	
	A. Increase access to transit for Clatsop County residents	#4

Goal	Objective	Highest Priority (Public Input)
3. Accessibility: Ensure Service Accessibility[4]	B. Maintain lifeline service to rural areas of county	
4. Reliability: Provide reliable transportation[6]	A. Adhere to scheduled run times	#2
5. Sustainability: Compete with SOV travel and reduce vehicle miles traveled per capita[5]	A. Reduce travel time on high-ridership routes	
	B. Increase ridership on Primary Transit Network[7]	
	C. Operate service on all primary transit networks with enough frequency to make transit a convenient option	#3
6. Capacity: Ensure sufficient system capacity[4]	A. Provide adequate seating capacity	
	B. Ensure adequate on-board bicycle capacity	
	C. Provide adequate ADA Paratransit capacity	

Notes:
[1] Standards presented in the performance metric column are preliminary thresholds of acceptable performance based on peer systems and industry norms. (To be refined in Memo #8)
[2] Represents a current SETD goal
[3] Represents a Title VI required measure (system-wide service standard per FTA Circular 4702.1B)
[4] Represents a Comp Plan/TSP goal
[5] Represents the goal associated with the Transportation Planning Rule (TPR) benchmark and SETD desire to increase ridership
[6] Represents a stakeholder goal / SETD concern
[7] Primary Transit Network, as defined in Memo #3, are the most densely developed corridors or have the highest future potential population/employment density, and/or connect the most significant transit demand generators. They have the highest potential to warrant investments in higher levels of transit service (e.g., more frequent or more direct service).
[8] Service cancellations can be eliminated or minimized through increased reliability and sufficient spare vehicles.
[9] A trip is considered "denied" if the trip cannot be accommodated one hour before or one hour after the desired time. Denials are not permitted under the ADA.

SERVICE DESIGN PRINCIPLES

Defining service types leads to different performance measure categories, and design guidelines help justify service planning decisions.

Service Types

SETD generally provides three types of service as shown in Figure 7-2. Performance measures vary based upon types, because each one serves a different purpose and market. Some services are a hybrid of these service types, such as Route 20, which operates as a local fixed-route in Cannon Beach and Seaside, but provides intercity service between these communities. Constituents continually ask for service changes or justification for where routes run and when they operate. Creating a policy framework including service types and determining the coverage and productivity balance allow the transit agency to defend decisions and justify service design.

Table 23. Performance Measures and Benchmarks

	Benchmarks	DAR	NW Rides	Deviated-Fixed Route	Intercity	Other Services	Goal	Timeframe
System Productivity	Passengers per Service Hour							
	FY 13/14 Average	1.35	0.60	6.10	3.11	9.72		
	FY 14/15 Average	1.56	0.55	5.78	2.58	6.75	+	Monthly/Quarterly/Annually
	Passengers per Service Mile							
	FY 13/14 Average	0.10	0.03	0.27	0.10	1.38		
	FY 14/15 Average	0.10	0.02	0.26	0.09	1.00	+	Monthly/Quarterly/Annually
	Total Passenger Miles							
	Baseline	Reference Table 24					+	Ad Hoc
Economic Performance	Total Cost per Passenger							
	FY 13/14 Average	35.27	105.13	12.15	26.55	5.30		
	FY 14/15 Average	24.65	100.36	10.16	25.29	5.49	-	Monthly/Quarterly/Annually
	Farebox Recovery							
	FY 13/14 Average	15%	52%	13%	33%	30%		
	FY 14/15 Average	34%	81%	12%	33%	29%	+	Monthly/Quarterly/Annually
	Total Cost per Service Hour							
	FY 13/14 Average	47.69	63.17	74.15	82.53	51.50		
	FY 14/15 Average	38.57	54.97	58.68	65.18	37.04	-	Monthly/Quarterly/Annually
	Total Cost per Service Mile							
	FY 13/14 Average	3.46	3.02	3.31	2.78	7.32		
	FY 14/15 Average	2.43	2.15	2.64	2.20	5.51	-	Monthly/Quarterly/Annually
Maintenance	Number of Vehicle Breakdowns[1]							
	Baseline	-	-	-	-	-	-	Monthly/Quarterly/Annually
	Maintenance Cost per Vehicle[2]							
	FY 13/14 Average	742	742	742	742	742		
	FY 14/15 Average	419	419	419	419	419	-	Monthly/Quarterly/Annually
Customer Experience	Number of Missed Connections with Coordinated Transit Systems[3]							
	Baseline	-	-	-	-	-	-	Monthly/Quarterly/Annually
	Number of Customer Complaints and Compliments[4]							
	Baseline	-	-	-	-	-	+	Quarterly/Annually

[1] TCTD does not currently have data to inform a benchmark or trend but should implement one and monitor for a decrease over time or use the data to inform decisions on maintenance and fleet replacement.
[2] Reflects costs associated with account # 5340
[3] TCTD does not currently have data to inform a benchmark or trend but should implement one and monitor for a decrease over time.
[4] TCTD does not current keep track of customer complaints and compliments; however, with more of an online presence, TCTD can track more easily. An increase in number of customer complaints and compliments suggests increased public exposure.

LRTP FRAMEWORK ELEMENTS

The success of the LRTP will essentially rest on its ability to serve as a framework for addressing the strategic challenges summarized in Table 2 on page 20. That framework is made up of a set of goals, policies, strategies, and performance measures, which is presented in Section 3. These elements are briefly defined below:

GOALS
The framework has six goals that articulate LTD's objectives for the future.

POLICIES
There are a number of polices outlined for each goal.

STRATEGIES
Each policy has strategies associated with it that provide LTD with potential tactics for reaching the overarching goals.

PERFORMANCE MEASURES
Performance measures connect long-range planning to daily actions, and they allow LTD to monitor progress.

ADDRESSING LTD'S STRATEGIC ISSUES
CONNECTING ISSUES TO GOALS
A first step in evaluating the extent to which a plan has the potential to address an agency's issues is to assess the connection between the issues facing that agency and the goals that have been set in the plan. Table 3, on page 23, provides a summary of how the goals developed for LTD's LRTP connect to the strategic challenges identified in this section. This assessment shows that the proposed goals are framed in a manner that covers the range of anticipated strategic challenges facing LTD over the next 20 years.

TABLE 3: Mapping Strategic Issues to Goals

STRATEGIC CATEGORY	STRATEGIC CHALLENGE	RELATED GOALS
REVENUE AND COST MANAGEMENT	•Sustaining a level of service while adapting to the uncertainties in future funding from state and federal sources •Managing payroll tax fluctuations in a manner that facilitates a sustainable level of service over multiple years • Examining appropriate funding options needed to meet the transportation needs of the community •Monitoring fuel volatility and cost trends to determine the appropriate balance of new propulsion technologies	**Goal 5**: Use LTD's resources sustainably in adapting to future conditions
WORKFORCE DEVELOPMENT	•Obtaining the skill sets needed to handle advancements in technologies associated with the operation and maintenance of transit vehicles •Fostering an organizational culture that can adapt to the rapid change anticipated in the coming years •Managing personnel costs	**Goal 5**: Use LTD's resources sustainably in adapting to future conditions
PARTNER RESOURCES	•Sustaining and deepening existing relationships •Fully developing emerging relationships	**Goal 5**: Use LTD's resources sustainably in adapting to future conditions **Goal 6**: Engage the regional community in LTD's short- and long-term planning processes
CONNECTING TO RIDERS AND EMERGING MARKETS	•Being able to anticipate changes in the demand for transit brought about by shifts in the factors that influence transportation behavior	**Goal 1**: Provide attractive travel options to improve ease of connectivity throughout LTD's service area **Goal 3**: Ensure equitable and accessible transit service throughout LTD's service area **Goal 4**: Maintain and enhance safety and security of LTD's services **Goal 6**: Engage the regional community in LTD's short- and long-term planning processes
CONNECTING TO OTHER MODES	•Monitoring technology uses and how they impact transportation decisions and costs •Incorporating new technologies that increase the ease of using transit	**Goal 1**: Provide attractive travel options to improve ease of connectivity throughout LTD's service area **Goal 3**: Ensure equitable and accessible transit service throughout LTD's service area **Goal 4**: Maintain and enhance safety and security of LTD's service
CONNECTING TO BROADER COMMUNITY VISIONS	•Ability to collaborate with partners (both private and public) to plan and invest in intermodal systems of connectivity	**Goal 2**: Sustain and enhance economic prosperity, environmental health, and quality of life in the community through investment in transit service and infrastructure **Goal 6**: Engage the regional community in LTD's short- and long-term planning processes

TABLE 4: Summary of Key Performance Measures

GOAL	GOAL FOCUSES	POTENTIAL MEASURES	PM 1: ON-TIME DEPARTURES (PERCENT OF TOTAL DEPARTURES)	PM 2: PERCENT OF PLANNED FTN MILES CURRENTLY IN OPERATION
GOAL 1: Provide attractive travel options to improve ease of connectivity throughout LTD's service area	• Attractive travel options • Ease of connectivity	• Service reliability • Frequency • Ridership • Coverage • Intermodal connectivity*	X	X
GOAL 2: Sustain and enhance economic prosperity, environmental health, and quality of life in the community through investment in transit service and infrastructure	• Economic prosperity • Environmental health • Quality of life	• Service reliability • Frequency • Coverage • Efficiency	X	X
GOAL 3: Ensure equitable and accessible transit service throughout LTD's service area	• Equitable Service • Accessible Service • Coverage	• Service reliability • Frequency • Coverage • Physical design of the system*	X	X
GOAL 4: Maintain and enhance safety and security of LTD's services	• Safety • Security	• Frequency of incidents • Rider perception of safety and security*		
GOAL 5: Use LTD's resources sustainably in adapting to future conditions	• Resources • Sustainability • Adaptability • Future conditions and long-term trends	• Frequency • Ridership • Coverage • Efficiency • Resource trends*	X	X
GOAL 6: Engage the regional community in LTD's short- and long-term planning processes	• Engagement	• Quality of engagement* • Quantity of engagement* • Engagement tools and approaches*		

PM 3: PASSENGER MILES PER HOUR REVENUE	PM 4: PASSENGER MILES PER CAPITA	PM 5: PERCENT OF HOUSEHOLDS WITH ACCESS TO TRANSIT	PM 6: PERCENT OF EMPLOYERS WITH ACCESS TO TRANSIT	PM 7: PREVENTABLE VEHICLE COLLISIONS (PERCENT OF TOTAL VEHICLE COLLISIONS)	PM 8: SENSE OF SAFETY WHILE RIDING WITH OTHER PASSENGERS	PM 9: OPERATING COST PER VEHICLE REVENUE MILE	PM 10: OPERATING COST PER BOARDING	PM 11: GENERAL RIDER SATISFACTION
X	X	X	X		X			X
X	X	X	X			X	X	X
	X	X	X					X
				X	X			
X	X	X	X			X	X	X
					X			X

*These elements require data that LTD does not currently collect or is not readily available. They will require a broader conversation about monitoring and reporting prior to establishing performance measures.

Statement of Work Template
Transit Development Plan

Project Purpose and Transportation Relationship and Benefit

The purpose of the Transit Development Plan (TDP) is to provide short and long-term strategic guidance to the Transit Agency for the provision of transit services, bus stop and facility siting, and coordination with adjacent transit providers over the 20-year planning period. The Project will examine how the Transit Agency can enhance its rural community service by improved and better integration with existing urban and outlying services to meet the needs expected from future regional growth and tourism. There are several opportunities in the region for increased use of transit that the project team will explore, including:

- Making service more attractive to choice riders
- Development of transit facilities and amenities
- Exploration of demand in the service area
- Understanding travel needs along key corridors
- How to achieve greater efficiencies between the Transit Agency and other transit providers
- Taking advantage of technology advances
- Better integrating land use and transportation decisions

The TDP will serve as the basis for the transit element of transportation system plans adopted by local jurisdictions within the Transit Agency's service area, and provide guidance to these jurisdictions for their efforts to increase transit use and reduce greenhouse gases.

> **Tip**: The purpose of a TDP is discussed in Chapter 1: Introduction of the TDP Guidebook.

Study Area

The Study Area consists of the area within which the Transit Agency provides its different levels and types of service (*See attached Transit Agency's Main Service Area*):

Transit Agency's main service area comprises of (Describe the geographic boundaries of the transit service area). Services are provided to (Fill in the jurisdictions that are provided services such as the cities and counties).

> **Tip**: Cut and paste or attach the Transit Agency Bus Service Maps. Figure 1-1 in Chapter 1: Introduction of the TDP Guidebook shows an example TDP study area and plan coordination needs.

Background

Transit Agency was formed by the (Describe how transit agency was formed) on (Fill in date of formation) to provide federally funded bus service in (Fill in service area). The District includes (Fill in service area) covering approximately (Fill in size) square miles. Transit Agency provides (Fill in types of service such as fixed route, paratransit, non-emergency medical transit, etc.) All services are

> **Tip**: Transit agencies can be formed as an ORS 267.510 transportation district or be a department within a city or county.

open to the general public. Routes operate within and connect between the following cities: (Fill in cities that are served) and service along the (Fill in major roads and highways) corridors.

Transit Agency's original Transit Plan was adopted in (Fill in date of adoption) with a planning horizon of (Fill in number of years the transit plan covers). It has been (Fill in) years since the Transit Plan was adopted and the development conditions have greatly changed. Additionally, at the federal, state and local levels of public transportation, the funding targets and scope have changed significantly. Transit Agency can no longer rely on the existing plan and needs to develop a new TDP that is relevant to current and future conditions.

Over the past (Fill in) years, Transit Agency has gone through significant changes such as (Fill in changes that have occurred since the previous transit plan was adopted). The TDP project will provide Transit Agency with the short and long-term strategies the agency should pursue and a strategic direction that will meet the needs of its residents and visitors.

(Fill in other planning agencies working on projects in the study area) is currently working on updating their (Fill in the names of the other plans) Plan; Project must be coordinated with this effort.

Project Objectives

The Project objectives are to develop a TDP that will address the following:
- Enhancement and better integration of public transportation services throughout the Study Area, including siting of future transit facilities and amenities (bus stop locations, park and ride facilities and a transit center);
- Better integration of all services provided by Transit Agency and with services provided by adjacent transit providers;
- Preservation of the function of state highways by expanding regional public transit availability and reducing the number of single occupancy vehicles on the road;
- Encouragement of transit-supportive land uses through a coordinated and cooperative process with Study Area communities to identify existing and future transit corridors;
- Contribution to reducing greenhouse gas emissions through enhanced and expanded public transportation services; and
- Promote the full range of transportation options in the region, including car-sharing, vanpooling, biking, walking, and use of public transit.

Expectations about Written and Graphic Deliverables

Text: All written deliverables must be substantially complete in draft version, needing minimal editing, and include the project name, a title that refers to the contract deliverable, draft number, subtask number and date of preparation.

Tip: The reasons for the development of a TDP are discussed in Chapter 3: TDP Context in the TDP Guidebook.

Tip: Examples of other transportation planning projects can be found in Chapter 1: Introduction of the TDP Guidebook.

Transportation planning documents can be found at the following link: http://gisprod.odot.state.or.us/tpod/.

Transportation projects in Oregon can be found at the following link: http://www.oregon.gov/ODOT/Projects/Pages/default.aspx.

State/County/City planners and engineers can also be contacted to find out what projects are being worked on in the study area so the TDP can be coordinated with them.

Tip: Project objectives can be tailored to the specific TDP project statement of work.

Written deliverables must be provided in 14 point font and appropriate color contrast for the visually impaired. The Transit Agency will read summaries of documents into a recording for the people who cannot read or are visually impaired. Consultant shall provide electronic copies of text deliverables, unless otherwise specified. Electronic versions must include both .pdf and an editable text format acceptable to Transit Agency and ODOT's Project Manager ("APM"). Transit Agency and APM require Microsoft Word format for editable versions.

Maps and Graphics: Consultant shall provide high resolution map and graphic deliverables in electronic format to Transit Agency and APM, unless otherwise specified. Final versions of maps and graphics must be provided as .jpegs and as .pdfs; drafts may be provided as .pdfs only. Maps must include details necessary to ensure usability, such as city limits, Urban Growth Boundary, street names, relevant environmental and cultural features, legend, date, etc. Maps must be at a scale that is legible and in proportion for the intended purpose, as determined by Transit Agency and APM.

Geographic Information System ("GIS") Deliverables: Consultant shall provide all GIS shapefiles on a CD at the completion of the project for Transit Agency and APM.

Adoption ready: Consultant shall prepare final TDP and amendments to other plans as final policy statements of the local government and must not include language such as "it is recommended…" or "Transit Agency should…" Consultant shall prepare new and amended code language as final regulatory statements of Transit Agency. Final TDP, plan amendments, code, and code amendments enable full integration of proposed TDP with existing Transit Agency documents.

Distribution of Deliverables: Unless otherwise stated in the tasks, Consultant shall distribute draft deliverables electronically to Transit Agency and APM. Consultant shall allow a minimum of one week for deliverable review.

All draft deliverables include one round of Consultant revisions to respond to Transit Agency and APM comment.

Consultant shall distribute revised draft deliverables electronically to Transit Agency one week prior to Advisory Committee ("AC") meetings or other public involvement event.

Transit Agency shall distribute draft deliverables electronically to AC members prior to committee meetings.

Following AC Meetings and public involvement events, Consultant shall prepare final versions of draft deliverables to respond to comments and distribute them

> **Tip**: Project deliverables can be formatted in a way to communicate with stakeholders who may have hearing or vision impairments or language barriers. Tailor this section of the statement of work according to the needs of the particular TDP project.

electronically to Transit Agency and APM. In all cases, Consultant shall incorporate comment recommendations or explain why they were not included.

Any traffic analysis or design work must be done by or under the review of an Oregon-registered professional engineer (Civil and/or Traffic). Final technical memorandums containing transportation analysis must be stamped.

Transit Agency's Project Manager shall provide consolidated Transit Agency written review comments to Consultant on all Consultant deliverables for comments from the Project Management Team ("PMT") and AC.

Expectations about Meetings

Transit Agency shall organize all meetings including providing meeting space, notice, reproduction and distribution of announcements and informational written materials, postage and mailing or e-mailing. The location of the meetings must be ADA accessible. The meeting notices must include the following statement: "…ACCOMMODATION OF PHYSICAL IMPAIRMENTS: In order to accommodate persons with physical impairments, please notify Transit Agency of any special physical or language accommodations you may need as far in advance of the meeting as possible and no later than 48 hours prior to the meeting…"

Transit Agency shall organize all public events, including providing meeting space, required legal notice, reproduction and distribution of announcements and informational written materials, postage and mailing or e-mailing, and publishing materials on Transit Agency's website.

Transit Agency shall organize all Transit Agency's Board meetings including providing meeting space, required legal notice, agendas and staff reports, reproduction and distribution of announcements and meeting materials, postage and mailing or e-mailing, and minutes.

Consultant shall prepare agendas and provide summaries of all meetings and public involvement events other than Transit Agency Board meetings. Summaries must consist of meeting minutes for all AC meetings and public events, but may be briefer decision and next step logs for PMT meetings. Consultant shall prepare meeting and presentation materials appropriate to the space, expected number of attendees, and purpose.

Public Involvement Approach

Public involvement must allow residents and business owners an opportunity to provide input into the planning process. Transit Agency and Consultant shall consider environmental justice issues, which is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of

environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or a socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. Meaningful involvement means that: (1) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; (2) the public's contribution can influence the regulatory agency's decision; (3) the concerns of all participants involved will be considered in the decision making process; and (4) the decision makers seek out and facilitate the involvement of those potentially affected.

The public involvement program must include specific steps to provide opportunities for participation by federal Title VI communities. Transit Agency and Consultant shall use the ODOT Title VI (1964 Civil Rights Act) Plan guidance to identify Title VI populations, formulate public involvement strategies, and report outreach efforts to and participation by Title VI communities.

Consultant shall prepare rider and non-rider survey material in Spanish as specified within scope tasks, and Transit Agency shall provide live Spanish translation services for outreach efforts and open houses.

> **Tip**: Translations can be provided in Spanish or other languages applicable to the study area. All of this work can be incorporated into the Interim and Final Title VI Reports in Subtasks 1.13 and 6.4.

The public involvement process is paramount in the Study Area since community, local and county government, and business owner support is key to the successful adoption of the TDP. Project includes a strategy to encourage public involvement utilizing stakeholder interviews, outreach events, questionnaires, project website, open houses, AC meetings, Board of Commissioner's work sessions and the public hearing process. Outreach efforts should also make sure to include Transit Agency staff, social service providers, the school districts, current transit riders, and future transit riders.

The following tools will be used to facilitate project outreach:
- Passenger survey and ridecheck – The on-board passenger survey (which shall be prepared by the consultant and conducted by Transit Agency staff) will discover the needs of existing riders, while the ridecheck will supplement information collected by Transit Agency and provide stop-level boarding and alighting information.
- Outreach at events – Consultant shall conduct six outreach events that will be held at two different stages in the process. First, needs assessment data collection will be held during the first quarter of the project. The second set of outreach will occur after the future service opportunities memo has been drafted and the purpose will be to gather feedback.
- Personal outreach – In rural areas, reaching out to people in non-traditional ways—at targeted community centers, networking events, bowling alleys, or the like—will provide a layer of insight often not

> **Tip**: The public outreach tools can be tailored to meet the needs of the particular project. A typical TDP stakeholder involvement framework and best practices are discussed in Chapter 4: Stakeholder Involvement of the TDP Guidebook.

attained through venues like public meetings. Transit Agency shall conduct outreach of this nature.

- Open houses – Consultant shall conduct a total of 4 open houses once the draft plan is coming together. Virtual open houses will also be held in addition to the standard open houses.
- Webpage – Consultant shall provide Transit Agency input in a webpage that shall be built and hosted by Transit Agency. This will also help Transit Agency unveil its own new webpage look. The consultant team shall provide data that can be posted as available throughout the project.
- Service options survey – Once service options have been developed, the consultant shall design another on-board and online survey and Transit Agency will distribute the survey to reach both riders and non-riders.
- Transit Agency Board work sessions – Two work sessions will be held with the Transit Agency Board. The first one will kick off the project, review goals, and allow the board to identify their key issues. The second work session will allow the Board to provide feedback on draft recommendations.
- Add Stakeholder meetings for document consistency.

Tip: The webpage can also be built and hosted by the consultant and the link to the webpage placed on the Transit Agency's existing webpage.

Task 1   Project Initiation and Existing Conditions

Purpose: Lay the Project groundwork by gathering pertinent background information, documenting the planned public and stakeholder involvement process, assessing existing conditions, forming a committee to help guide the Project, and building a web site intended to involve and inform the general public about the Project.

Subtasks

1.1   <u>Project Initiation & Project Management</u> – In this subtask, Consultant and Transit Agency will gather together the background materials and contact information to begin our work. Gathering previous studies, GIS data, and forming the PMT and AC teams are administrative tasks that will initiate the project.

Coordination Calls/PMT calls – The team will host a call with Transit Agency after contract execution to go over immediate next steps. We will set up a bi-weekly check-in call for the duration of the project.

Tip: The work conducted in previous planning efforts (GIS data, traffic counts, rider surveys, National Transit Database work, stakeholder lists, etc.) can be used in this TDP project to save time and money.

Background Information – Transit Agency shall provide to Consultant available Background Information, consisting of Transit Agency, local, regional, and state policy and regulatory documents and existing data, including the following:
   a. Transit Agency Transportation Plan (Fill in date), Local and/or Regional Transportation System Plans (Fill in date), Local and/or Regional Human Services Coordinated Plans (Fill in date), Corridor

Tip: Chapter 1: Introduction of the TDP Guidebook provides guidance on how a TDP relates to other plans. The background information list can be tailored to the specific TDP project.

Plans (Fill in date), Bike and Pedestrian Plans (Fill in date), Safety Plans (Fill in date), Economic Plans (Fill in date), Housing Plans (Fill in date), Downtown Plans (Fill in date), Master Plans (Fill in date), Parking Plans (Fill in date), Parks & Recreation Plans (Fill in date), Local Government Comprehensive Plans (Fill in date), Local Government Land Development Codes (including development review processes) (Fill in date), and other Transit Agency background documents;

b. Transportation Planning Rule ("TPR") benchmarks, urban growth boundary expansion-related plans, buildable lands inventories, and any other key future land development studies and plans, including population, employment, and household forecasts;

c. Fixed route data – including number of routes, service hours, number of passengers per service hour/service mile, and limitations;

d. Rural service – including number of Transit Agency's deviated fixed routes, flex routes and dial-a-ride services, number of passengers; and any existing documentation of unmet need in rural communities;

e. Fleet inventory, age, and capital replacement schedule;

f. Operating and capital budgets;

g. Organizational information including staffing levels and responsibilities;

h. Travel patterns (origin and destination data) for Transit Agency's services;

i. Travel forecasting data files;

j. Enterprise Rideshare – number of vanpool participants, coordination with other transit agencies;

k. Other transit services – information about services provided by adjacent transit providers and school districts;

l. Planned transit centers – information about location and planned design;

m. Location, ownership, and utilization at existing, planned, and informal park-and-ride facilities;

n. Transit surveys and information related to the users of the existing service such as the latest on-board surveys;

o. Per-unit costs for the purposes of developing cost estimates;

p. TGM publication entitled *Transit in Small Cities: A Primer for Planning, Siting, and Designing Transit Facilities in Oregon (2013)*; and

q. Comprehensive Plans and Development codes for cities and counties in service area.

Transit Agency shall request and organize the delivery of relevant GIS data. GIS data needed includes:
- Boundaries (counties and towns)
- Zoning
- Street centerlines with name and functional class

- Transit routes
- Stop by stop ridership (if available - can be in Excel)

PMT Roster and AC Roster – Transit Agency shall organize PMT and prepare PMT roster. The PMT must include APM, Transit Agency, Consultant, and others as identified by Transit Agency or APM. The purpose of the PMT is to coordinate the Project and guide project management decisions. The PMT is expected to meet via conference call once or twice per month or on an as needed basis as an assumed administrative component of each task's deliverables. In addition, certain in-person PMT meetings are specified within the individual tasks.

Transit Agency shall organize AC and prepare AC Roster containing member names and contact information. AC is expected to review and comment on deliverables and provide technical and policy advice according to member expertise. Transit Agency shall solicit AC members to include, but are not limited to, representatives from the following:

a. Transit Agency's Board of Commissioners member
b. Transit Agency's Senior and Disabled Advisory Committee member
c. County staff within the Study Area
d. Business commuter
e. Transit non-user
f. Family representative (parent who would be travelling with children)
g. Transit-dependent users or advocates (transportation-disadvantaged as per federal definition)
h. Person with a disability or advocate for people with disabilities
i. ODOT Region Planner
j. ODOT Regional Transit Coordinator
k. Cities within the Study Area
l. Tribal staff
m. Chamber of Commerce
n. School District staff
o. College representatives
p. Hospital/Healthcare staff
q. Housing Authority staff
r. Representatives from transit providers that connect to or have the potential to connect with Transit Agency
s. Minority group organizations
t. Transit Agency's Transportation Fund Committee
u. Economic Development Council staff
v. Port staff
w. Council of Government staff
x. Veteran Group staff
y. Major Employers staff

Tip: Advisory Committee is discussed in Chapter 4: Stakeholder Involvement of the TDP.

Tip: Advisory Committee member list can be tailored to meet the needs of the particular project. A typical TDP stakeholder involvement framework is discussed in Chapter 4: Stakeholder Involvement of the TDP Guidebook.

1.2   PMT Meeting #1 & Refined Schedule– Transit Agency shall organize and Consultant shall lead PMT Meeting #1 to review Project tasks, responsibilities, and deliverables, refine Project Schedule in Work Order Contract, and discuss issues related to preparing upcoming deliverables. As part of PMT Meeting #1, Transit Agency and Consultant shall determine an overall Project outreach approach to federal Title VI populations.

As part of PMT Meeting #1, Consultant shall prepare a Refined Schedule showing the duration of work tasks and subtasks and dependencies between work tasks in the Project. Consultant shall revise Refined Schedule after meeting and provide it electronically along with a decision log, documenting decisions made during the PMT meeting, notes on the decisions, and next steps definition to APM and Transit Agency. Consultant shall attend PMT Meeting #1 in person.

1.3   Memo #1: Public and Stakeholder Involvement Strategy (PSIS) – Consultant shall prepare Memo #1 that outlines the outreach efforts that will be undertaken to gain input throughout the duration of the project from a wide range of interested citizens and community representatives. The purpose of the PSIS is to identify all of the public outreach efforts and explain how they will be integrated with the project's technical work so these tasks can complement and support each other. Potential coordination with outreach efforts associated with parallel planning projects (list other local and regional plans and planning processes with which the TDP will coordinate with listed in Subtask 1.1) will also be accounted for. As applicable, Transit Agency's public involvement policies and practices will be referenced to show compliance. The project scope of work, which specifies what outreach efforts will be undertaken, will form the basis for the PSIS.

> **Tip**: Potential public and agency involvement strategies and best practices are discussed in Chapter 4: Stakeholder Involvement of the TDP Guidebook. The particular stakeholder involvement framework can be tailored for the specific TDP project based on the type of surveys, committees, mobile outreach, workshops and adoption process activities that will work best. The Human Service Coordinated Transportation Plans, Limited English Proficiency Plan, and local TSPs and Comprehensive Plan/ Zoning codes can help inform the public involvement process.

In Memo #1, consideration will be given to outreach needs and reporting requirements consistent with the Federal Title VI Program and Environmental Justice Executive Order (EJEO) provisions, to ensure full and fair participation by all potentially affected community members in the decision-making process. This will include an analysis of the census data to report on the numbers of protected populations. Particular attention will be given to Spanish speakers and those without internet access to determine how best to accommodate their needs during outreach efforts.

Transit Agency and PMT shall review and provide one consolidated set of written comments on Memo #1. Consultant shall revise Memo #1 to respond to Transit Agency and PMT comments.

1.4 <u>Draft Memo #2: Existing System Draft</u> – Consultant shall prepare draft Memo #2 that documents the nature and extent of Transit Agency and non- Transit Agency -provided transit services in service area, assesses strengths and limitations of Transit Agency and non- Transit Agency - provided transit service, vehicle profiles, defines and identifies existing transit markets based upon household survey data and travel demand modeling information from ODOT, and assesses unmet intercity and intra- city existing and future transit markets in urban and rural areas and for special populations such as seniors, disabled, youths, veterans, and others who may be transportation-disadvantaged. Consultant shall use forecast data from ODOT to identify future transit markets and compare to existing transit service to assess gaps or unmet needs.

In preparing draft Memo #2, Consultant shall gather additional background information on the following types of transit services and market factors:
a. Ride Care;
b. Transportation Options Program;
c. Non- Transit Agency transit services within the Study Area – information necessary to document the existing transit system, including for ODOT's Drive Less Connect campaign;
d. Transit providers in adjacent counties or cities with initial potential (as determined by Transit Agency prior to beginning draft) to better coordinate with Transit Agency services;
e. Special populations – information necessary to identify unmet transportation needs for the transportation-disadvantaged using stakeholder outreach and the Census;
f. Base year data relating to defined transit market characteristics, including origin and destination data related to transit trips;
g. Transit specific model available to measure unmet need;
h. Record and identify current resources that are available to determine how the current fare structure is supporting the existing system;
i. Current use of transit technology; and
j. Inventory of community agencies.

Memo #2 may include information gathered in subtasks 1.6 through 1.10 and will be an ongoing effort completed in advance of subtask 1.11: AC Meeting #1.

Information in Memo #2 must be presented in narrative form with tables, maps, photographs, and other graphics necessary to communicate key ideas and findings.

As part of this deliverable, Transit Agency shall organize outreach and coordination conference calls with cities, transit agencies, and counties

> **Tip**: The existing state of the transit system is discussed in Chapter 6: Baseline Conditions of the TDP Guidebook.
>
> The existing state of the transit system serves as a baseline against which needs and improvement alternatives can be identified and evaluated.

within the Study Area. Consultant shall participate in up to 12 outreach and coordination conference calls, as determined by APM.

1.5   Final Memo #2: Existing System – Transit Agency and PMT shall review and provide one consolidated set of written comments on draft Memo #2. After one round of revision, memo will be sent to the AC for review. Consultant shall prepare final Memo #2 after AC Meeting #1 to respond to AC comments.

1.6   Project Webpage – Within 2 weeks of PMT Meeting #1, Consultant shall provide Transit Agency input on the layout of the Project Webpage. Transit Agency shall develop a Project Webpage on the Transit Agency website. Consultant shall develop Project Webpage materials to be compatible with Transit Agency Web requirements. Consultant shall develop Initial Materials which include a Project overview and objectives, Refined Schedule, a list of Project deliverables, and Transit Agency contact information. Transit Agency will manage the website and add all necessary materials as they are made available.

> **Tip**: The project webpage can be created and hosted by the transit agency or the consultant.

1.7   Questionnaire #1 – Consultant shall prepare a Questionnaire #1 (passenger survey) to identify system needs, both in online and on-board/paper formats. The passenger survey will ask peoples' origins and destinations, reasons why they take transit, and ideas for improvement. This data provides an important picture of how and where people are using the system, and collecting any missing routes as part of this study will be a valuable component of the plan that Transit Agency can use for many other purposes. Thus we propose adding a ridecheck component to the survey. Both passenger survey and ridecheck can be conducted by one person riding each vehicle. Transit Agency has staff on the ground who will distribute the survey. Consultant to finalize survey questions based on Transit Agency comments. Consultant shall translate the finalized online and on-board Questionnaire into Spanish as well as English. Transit Agency shall administer on-board Questionnaire #1 and post online Questionnaire #1 on Project Webpage. As determined by APM, Questionnaire #1 may occur while Memo #2 is being developed or after it is drafted to gain validation of needs identified within the draft. Consultant shall prepare a tally of Questionnaire responses #1 and incorporate findings into Memo #2.

> **Tip**: The consultant can provide sample passenger surveys or they can be found in adopted TDPs. It is important to consider seasonal variation when performing the surveys. Transit staff can utilize their own staff, hire temporary employees, seek volunteers or even arrange to have students in a college class perform this work. The local work on this task can be used to meet match requirements.

1.8   Stakeholder Small Groups – Consultant shall hold four Stakeholder Small Group discussions with stakeholders and in service-area locations as suggested by Transit Agency to introduce the Project and solicit comments about how well existing transit services address their needs and what ideas they have for future or improved services. As determined by APM, the Stakeholder Small Group discussions should occur while Memo #2 is being developed or after it is drafted to gain validation of needs identified

within the draft. Transit Agency shall schedule meeting times, contact participants, and arrange logistics, with all Stakeholder Small Group discussions to be scheduled logistically for no more than two Consultant trips. Consultant shall provide written minutes for each Stakeholder Small Group and incorporate findings from the Stakeholder Small Groups meetings into Memo #2. No more than two Consultant staff is required to attend Small Group meetings in-person.

1.9   Transit Agency Board of Commissioners Work Session #1 – Transit Agency shall organize and Consultant shall lead a work session with the Transit Agency Board to kick off the project, review goals, and solicit comments regarding existing service and ideas for future or improved services. As determined by APM, the Transit Agency Board Work Session #1 may occur while Memo #2 is being developed or after it is drafted to gain validation of needs identified within the draft. If possible, the Transit Agency Board work session should be scheduled on the same day as the Stakeholder Small Groups to reduce consultant travel.

> **Tip**: The Board of Commissioners Work Sessions can also be in a contingent task to provide more flexibility in where they occur in the TDP project.

1.10   Outreach Efforts #1 - Consultant and Transit Agency shall perform up to six total Outreach Efforts, with three occurring in this subtask. Outreach Efforts #1 events are three of the six events intended to assess existing regional transit service and identify transit system needs, including those for special populations, such as seniors and persons with disabilities. As determined by APM, these events may occur while Memo #2 Existing System is being developed or after it is drafted to gain validation of needs identified within the draft. Consultant shall prepare materials, including a means to record comments, and develop a strategy and schedule to coordinate Consultant and Transit Agency attendance at area gathering places and events, such as farmers markets, school events, grocery stores, and shopping centers. No more than two Consultant staff must attend each Outreach Efforts #1 event, each event is expected to be approximately 2 hours in duration, and events must be scheduled logistically to require no more than two Consultant trips.

> **Tip**: The outreach efforts can help determine opportunities to improve service for existing customers as well as how to encourage non-riders to utilize the bus service.

Consultant shall prepare a summary of comments received from Outreach Efforts #1 events, to be finalized after review by Transit Agency and APM and incorporated into Memo #2.

1.11   AC Meeting #1 – Transit Agency shall organize and Consultant shall lead AC Meeting #1 to introduce the Project and its objectives, and solicit AC comments on the completeness, accuracy, and findings of draft Memo #2. Transit Agency shall review AC comments and provide consolidated recommendations to Consultant on revisions for Memo #2.

> **Tip**: The transit agency can tour the key parts of their service area in a bus or can set up a virtual tour depending on project budget and time requirements.

1.12   Study Area Tour - Transit Agency and Consultant shall co-facilitate a tour of Project Area on the same day as AC Meeting #1 with PMT, AC and

other interested parties. Transit Agency shall provide transportation for the Study Area tour.

1.13   <u>Interim Title VI Report</u> – Transit Agency shall prepare and submit to APM an Interim Title VI Report, based on public involvement to date on the Project, which documents Project process and outreach for all income, race, gender, and age groups.

Transit Agency Deliverables
1.A   Project Initiation & Project Management (Subtask 1.1)
1.B   PMT Meeting #1 attendance (Subtask 1.2)
1.C   Memo #1 outreach, coordination, review, and Transit Agency /PMT comment (Subtask 1.3)
1.D   Draft Memo #2 outreach, coordination, review, and Transit Agency /PMT comment (Subtask 1.4)
1.E   Final Memo #2 outreach, coordination, review, and AC comment (Subtask 1.5)
1.F   Project Webpage (Subtask 1.6)
1.G   Questionnaire #1 (Subtask 1.7)
1.H   Stakeholder Small Groups (Subtask 1.8)
1.I   Transit Agency Board of Commissioners Work Session #1 (Subtask 1.9)
1.J   Outreach Efforts #1 (Subtask 1.10)
1.K   AC Meeting #1 (Subtask 1.11)
1.L   Study Area Tour (Subtask 1.12)
1.M   Interim Title VI Report (Subtask 1.13)

Consultant Deliverables
1.A   Project Initiation & Project Management (Subtask 1.1)
1.B   PMT Meeting #1, Refined Schedule and Focus Areas (Subtask 1.2)
1.C   Memo #1 (Subtask 1.3)
1.D   Draft Memo #2 (Subtask 1.4)
1.E   Final Memo #2 (Subtask 1.5)
1.F   Project Webpage Initial Materials (Subtask 1.6)
1.G   Questionnaire #1 (Subtask 1.7)
1.H   Stakeholder Small Groups (Subtask 1.8)
1.I   Transit Agency Board of Commissioners Work Session #1 (Subtask 1.9)
1.J   Outreach Efforts #1 (Subtask 1.10)
1.K   AC Meeting #1 (Subtask 1.11)
1.L   Study Area Tour (Subtask 1.12)

Task 2   Land Use Impact on Future Transportation Needs

Objective: Examine how regional transit service expansion could help meet the travel needs of future land uses in the Study Area and expand and/or enhance transportation choices.

Subtasks

2.1   Draft Memo #3: Land Use Impact on Future Transportation Needs –
       Consultant shall prepare draft Memo #3 that proposes up to 5 transit
       corridors between destinations within the Study Area based on planned
       future land uses and transit markets, with the actual number of corridors to
       be approved by PMT. Particular emphasis should be placed on connecting
       the incorporated cities. Consultant shall take the following actions in
       preparing draft Memo #3:
       a. Using adopted Comprehensive Plans of jurisdictions within the Study
           Area, identify the land use patterns of Study Area communities,
           considering the locations of housing, employment centers, commercial
           services, and other key destinations. Building on these land use
           patterns, assess future regional growth within the Study Area based on
           adopted Comprehensive Plans, available information from ODOT, the
           census bureau (2010 household to work travel patterns) and
           considering coordinated population forecasts, trends in housing and
           employment, comprehensive plan designations, buildable lands
           inventories, and planned development of major transportation
           corridors within Study Area communities;
       b. Use information from interviews with staff from each community
           within the Study Area conducted during Task 1 outreach efforts to
           learn how each is meeting their TPR-related benchmarks;
       c. Identify potential transit corridors within the Study Area based on
           planned future land uses, transit markets, and considering TPR-related
           benchmarks; and,
       d. Examine the potential cost of providing transit services, including
           frequency and span of service, to each transit corridor. Consultant
           shall develop a methodological approach to cost estimates with Transit
           Agency, seeking prior approval before estimating any costs. The
           agreed-upon methodology must be documented in memo form as an
           appendix to Memo #3.

       Information in Memo #3 must be presented in narrative form with tables,
       maps, photographs, and other graphics necessary to communicate key
       ideas and findings.

2.2   Final Memo #3: Land Use Impact on Future Transportation Needs -
       Transit Agency and PMT shall review and provide one consolidated set of
       written comments on draft Memo #3. After one round of revision, memo
       will be sent to the AC for review. Consultant shall prepare final Memo #3
       after AC Meeting #2 to respond to AC comments.

2.3   PMT Meeting #2 – Transit Agency shall organize and Consultant shall
       lead PMT Meeting #2 to review and discuss issues related to draft Memo

Tip: The number of proposed transit corridors should be negotiated between the transit agency, APM and consultant based on the need for the particular TDP project as well as the project budget.

Needs assessment is discussed in Chapter 7 of the TDP Guidebook.

Tip: The land use and development component of the TDP is discussed in Chapter 6: Baseline Conditions of the TDP Guidebook.

Interviews between staff from each community and the transit agency during the TDP project help to link transit staff with the development and planning activities in the communities. It is important that transit staff are engaged early in development and planning activities in the service area because new transit stops, increased service or route deviations may be needed.

The conversation can also be started about potential TSP and comprehensive plan / development code amendments that are needed to strengthen transit planning such as including the transit agency in the development review / planning process.

#3. Consultant shall prepare a decision and next steps log, documenting decisions made, notes on the decisions, and next steps defined during PMT Meeting #2. Leading into the evaluation framework task 3.1, at this stage it is important to begin the discussion of goal creation with the PMT. Taking into account the information analyzed in Memo #2, Memo #3, and various outreach activities, we shall begin drafting system goals that the evaluation framework will achieve.

<div style="border:1px solid purple; padding:5px;">
Tip: Performance measurement (evaluation framework) is discussed in Chapter 5: Vision and Goals of the TDP Guidebook.
</div>

2.4   AC Meeting #2 – Transit Agency shall organize and Consultant shall lead AC Meeting #2 to solicit AC comments on draft Memo #3. Transit Agency shall review AC comments and provide consolidated recommendations to Consultant on revisions for Memo #3. A high-level discussion of project goals will also be included.

2.5   Project Webpage Update – Transit Agency shall post and Consultant shall provide Task 2 Webpage materials, summarizing major findings from Memo #3. Consultant shall provide Webpage materials in English and Spanish.

Transit Agency Deliverables
2.A   Draft Memo #3 review and Transit Agency and PMT comment (Subtask 2.1)
2.B   Draft Memo #3 review and AC comment (Subtask 2.2)
2.C   PMT Meeting #2 (Subtask 2.3)
2.D   AC Meeting #2 (Subtask 2.4)
2.E   Project Webpage Update (Subtask 2.5)

Consultant Deliverables
2.A   Draft Memo #3 (Subtask 2.1)
2.B   Final Memo #3 (Subtask 2.2)
2.C   PMT Meeting #2 (Subtask 2.3)
2.D   AC Meeting #2 (Subtask 2.4)
2.E   Project Webpage Update materials for posting (Subtask 2.5)

Task 3   Envision Future Service Opportunities

Objective: Establish an evaluation framework to evaluate potential service opportunities. Build upon the work of previous tasks and identify potential service opportunities that address identified service gaps and needs. Identify ways to better coordinate services and strengthen the collaboration and communication among all transit service providers within the Study Area and with other key providers bordering the Study Area.

Subtasks

3.1   Draft Memo #4: Evaluation Framework - Consultant shall develop draft
        Memo #4, that establishes an evaluation framework to prioritize the future
        service opportunities to be developed in Memo #5. The evaluation
        framework must be structured to help determine the most urgent needs to
        address. Evaluation Criteria must include categories such as connections
        to land use, transit markets served, access for transportation
        disadvantaged, fare recovery potential, number of potential users served,
        and other categories as determined with the PMT.

Tip: Performance measurement (evaluation framework) is discussed in Chapter 5: Vision and Goals of the TDP Guidebook.

3.2   Final Memo #4: Evaluation Framework– Transit Agency and PMT shall
        review and provide one consolidated set of written comments on draft
        Memo #4. After one round of revision, memo will be sent to the AC for
        review. Consultant shall prepare final Memo #4 after AC Meeting #3 to
        respond to AC comments.

3.3   Draft Memo #5: Future Service Opportunities – Consultant shall prepare
        draft Memo #5, which identifies ways that Transit Agency can provide
        better transit service to communities within the Study Area and improve
        coordination with other transit providers both within and adjacent to the
        Study Area. As part of draft Memo #5, Consultant shall propose a vision
        of what transit service could become for meeting unmet transportation
        needs. In preparing draft Memo #5, Consultant shall take the following
        actions:

Tip: Future service opportunities analysis is discussed in Chapter 8: Alternatives Development and Evaluation of the TDP Guidebook.

        a. Contact communities within and adjacent to the Study Area to share
            findings from Memos #1 and #2 and discuss future transportation
            needs and potential future service. Transit Agency shall coordinate
            with County to obtain information relating to smaller communities that
            may have limited resources and cannot provide information directly to
            Consultant. Transit Agency shall participate in coordination calls.
            Consultant shall participate in up to 9 coordination calls and 3 in-
            person meetings, as determined by APM. In-person meetings will be
            scheduled to require no more than one trip.
        b. Through discussions with other transit providers both within and
            adjacent to the Study Area, identify ways to provide service where
            gaps occur, eliminate service duplication, increase linkages between
            systems, coordinate schedules between systems, plan fare media that
            can be used across transit systems, and plan joint marketing of transit
            within the region. Consultant shall provide schedule coordination
            potential at a strategic level and not at the precise level of timing at
            stops;
        c. Identify potential service opportunities, both urban and rural;
            Consultant shall identify potential service opportunities at a strategic
            or corridor level rather than the level of detailed route and stop
            information;

Tip: Other transit providers might include Amtrak, intercity bus, neighboring transit providers, non-profit social service transit providers, and private transit services such as employee shuttles, private ambulance providers, specialized services, taxis, private assisted living facilities & school system buses. Vanpool programs can also be included insofar as vanpool programs complement transit service. Other transit providers in the service area are discussed in Chapter 6: Baseline Conditions of the TDP Guidebook.

d. Identify potential transit market areas to support corridor level analysis using information best suited to meet the goals of this project, such as data provided by the ODOT Transportation Planning Analysis Unit;

e. Analyze types of transportation services that would be most appropriate for rural transit markets and service areas;

f. Assess cost of providing services with projected revenue stream. For budgeting purposes, Consultant shall prepare up to 5 cost estimates for all of the corridors as determined by PMT;

g. Propose possible service scenarios: identify the components of "best cases" that would achieve improved services; also consider service reduction scenarios and identify the impacts of reduced services;

h. Examine how improved transit services could contribute to the reduction of greenhouse gas emissions in Study Area and provide a qualitative or order-of-magnitude assessment using simple conversion factors; and

i. Future use of transit technology.

Information in Memo #5 must be presented in narrative form with tables, maps, photographs, and other graphics necessary to communicate key ideas and findings.

3.4 <u>Final Memo #5: Future Service Opportunities</u> - Transit Agency and PMT shall review and provide one consolidated set of written comments on draft Memo #5. After one round of revision, memo will be sent to the AC for review. Consultant shall prepare final Memo #5 after AC Meeting #3 to respond to AC comments.

3.5 <u>PMT Meeting #3</u> – Transit Agency shall organize and Consultant shall lead PMT Meeting #3 to solicit PMT comments on draft Memos #4 and #5. Consultant shall prepare a decision and next steps log, documenting decisions made, notes on the decisions, and next steps defined during PMT Meeting #3. A portion of this meeting will also cover progress on goal-setting begun in PMT Meeting #2, during which we will have very generally discussed project goals. Goals discussion in light of the future service opportunities findings will be discussed at PMT Meeting #3.

3.6 <u>AC Meeting #3</u> – To be held on the same day as PMT Meeting #3. Transit Agency shall organize and Consultant shall lead AC Meeting #3 to solicit AC comments on draft Memos #4 and #5. Transit Agency shall review AC comments and provide consolidated recommendations to Consultant on revisions for Memos #3 and #4.

3.7 <u>Project Webpage Update</u> – Transit Agency shall post and Consultant shall provide Task 3 Webpage materials, summarizing major findings from Memos #3, #4 and #5. Consultant shall provide materials in English and

Tip: The methodologies for estimating future baseline transit needs can be found in Table 7-2 in Chapter 7: Needs Assessment of the TDP Guidebook.

Tip: Identifying funding scenarios and costing improvements is discussed in Chapter 9: Financial Assessment of the TDP Guidebook.

Spanish. Transit Agency will assist the consultant with the Spanish translation of the major findings from Memos #3, #4 and #5.

3.8   Outreach Efforts #2 – Consultant shall conduct a second round of three outreach events to gather input on the service opportunities and evaluation framework tasks. PMT will discuss locations and will attempt to locate outreach events in areas that were not covered during round 1 to ensure geographic coverage.

Transit Agency Deliverables
3.A   Draft Memo #4 review and Transit Agency and PMT comment (Subtask 3.1)
3.B   Draft Memo #4 review and AC comment (Subtask 3.2)
3.C   Draft Memo #5 review and Transit Agency and PMT comment (Subtask 3.3)
3.D   Draft Memo #5 review and AC comment (Subtask 3.4)
3.E   PMT Meeting #3 (Subtask 3.5)
3.F   AC Meeting #3 (Subtask 3.6)
3.G   Project Webpage Update (Subtask 3.7)
3.H   Outreach Efforts #2 (Subtask 3.8)

Consultant Deliverables
3.A   Draft Memo #4 (Subtask 3.1)
3.B   Final Memo #4 (Subtask 3.2)
3.C   Draft Memo #5 (Subtask 3.3)
3.D   Final Memo #5 (Subtask 3.4)
3.E   PMT Meeting #3 (Subtask 3.5)
3.F   AC Meeting #3 (Subtask 3.6)
3.G   Project Webpage Update materials for posting (Subtask 3.7)
3.H   Outreach Efforts #2 (Subtask 3.8)

Task 4   Transit Goals Practices and Policies

Objective: Update transit-related goals and policies and establish benchmarks to measure progress toward the updated goals and policies.

Subtasks

4.1   PMT Meeting #4 – Transit Agency shall organize and Consultant shall lead PMT Meeting #4 to finalize project goals. These goals may entail updates to transit-related goals found in the Transit Agency Comprehensive Transportation Plan, Transit Agency Strategic Prioritization Plan, Transit Agency Coordinated Human Services Transportation Plan, and County and local jurisdictions' Transportation System Plans, or entirely new goals based upon the analysis and outreach

conducted for this project. Consultant shall prepare a decision and next steps log, documenting decisions made, notes on the decisions, and next steps defined during the PMT meeting.

4.2   Draft Memo #6: Updated Goals, Policies, and Practices – Consultant shall prepare draft Memo #6, which reviews existing goals, policies, and practices in Transit Agency Comprehensive Transportation Plan, identifies those needing to be updated, and proposes updates and revisions. Goals and policies are expected to include amendments to local Comprehensive Plans or development codes to help ensure access to transit is provided as part of future development and land use permitting processes and Transit Agency is notified of opportunities to review and/or participate in those processes. Consultant will identify key issues, goals and policies related to this issue and general strategies to achieve them. These will be further refined in Memo #8. In preparing draft Memo #6, Consultant shall consider the possible updates considered at PMT Meeting #4.

> **Tip**: Vision and goals and performance measurement (evaluation framework) are discussed in Chapter 5: Vision and Goals of the TDP Guidebook.

4.3   Final Memo #6: Updated Goals, Policies, and Practices - Transit Agency and PMT shall review and provide one consolidated set of written comments on draft Memo #6. After one round of revision, memo will be sent to the AC for review. Consultant shall prepare final Memo #6 after AC Meeting #4 to respond to AC comments. Transit Agency and the consultant will translate the major findings from Memo #6 into Spanish and Transit Agency will post them on the webpage.

4.4   Draft Memo #7: Future Service Opportunities Evaluation and Prioritization and Monitoring Program – Using the evaluation framework developed in Memo #4, Consultant shall evaluate future service opportunities and provide a draft prioritization list. Consultant shall also include a monitoring program to track performance of future service opportunities. The monitoring program typically includes elements such as:
- Service standards
- Cost efficiency metrics
- Service efficiency metrics
- Stop standards (amenities)

> **Tip**: Future service opportunities evaluation and prioritization and monitoring program are discussed in Chapter 6: Baseline Conditions and Chapter 8: Alternatives Development and Evaluation of the TDP Guidebook.

Rather than requiring time-intensive data collection, we will winnow down the list of performance measures to those key pieces that Transit Agency is already collecting or can easily obtain.

4.5   Final Memo #7: Future Service Opportunities Evaluation and Prioritization and Monitoring Program - Transit Agency and PMT shall review and provide one consolidated set of written comments on draft Memo #7. After one round of revision, memo will be sent to the AC for

review. Consultant shall prepare final Memo #7 after AC Meeting #4 to respond to AC comments.

4.6   AC Meeting #4 – Transit Agency shall organize and Consultant shall lead AC Meeting #4 to solicit AC comments on draft Memos #6 and #7. Transit Agency shall review AC comments and provide consolidated recommendations to Consultant on revisions for Memos #6 and #7.

4.7   Draft Memo #8: Transit Benchmarks – Consultant shall prepare draft Memo #8 to establish benchmarks suitable to be used to measure progress on the goals and policies recommended in Memo #6 and to measure progress on TPR-related transit requirements. In preparing draft Memo #8, Consultant shall take the following actions:

> **Tip**: Vision and goals and performance measurement (evaluation framework) are discussed in Chapter 5: Vision and Goals of the TDP Guidebook.

   a.   Evaluate existing Transit Agency benchmarks to determine suitability for use to evaluate individual strategies to be included in the TDP;
   b.   Identify TPR-related benchmarks in County and in individual local transportation system plans from communities in the Study Area;
   c.   Identify potential amendments to local comprehensive plans (policies) or development codes (new or revised code provisions) to address policy and code issues recommended in Memo #6;
   d.   Propose additional or revised benchmarks;
   e.   Determine how benchmarks should be assessed; and,
   f.   Compare benchmarks with data on previous performance, as provided by Transit Agency, and decide method for measurement in future years.

4.8   Final Memo #8: Transit Benchmarks - Transit Agency and PMT shall review and provide one consolidated set of written comments on draft Memo #8. After one round of revision, memo will be sent to the AC for review. Consultant shall prepare final Memo #8 after AC Meeting #5 to respond to AC comments.

4.9   AC Meeting #5 – Transit Agency shall organize and Consultant shall lead AC Meeting #5 to solicit AC comments on draft Memo #8. Transit Agency shall review AC comments and provide consolidated recommendations to Consultant on revisions for Memo #8.

4.10   Project Webpage Update – Transit Agency shall post and Consultant shall provide Task 4 Webpage materials.

4.11   Questionnaire #2 – Consultant shall prepare draft Questionnaire #2 (service options survey), in both online and on-board paper formats, to seek feedback on the prioritization of future service opportunities, such as service hours, service frequencies, and type of service; Consultant shall finalize based on Transit Agency comments. Consultant shall translate the finalized online and on-board Questionnaire into Spanish as well as

English. Transit Agency shall administer on-board Questionnaire #2 and post online Questionnaire #2 on its Webpage. Questionnaire #2 must be left open through the time of Open Houses conducted in Task 5. Consultant shall prepare a tally and analysis of Questionnaire responses.

Transit Agency Deliverables
4.A   PMT Meeting #4 (Subtask 4.1)
4.B   Draft Memo #6 review and Transit Agency and PMT comment (Subtask 4.2)
4.C   Draft Memo #6 review and AC comment (Subtask 4.3)
4.D   Draft Memo #7 review and Transit Agency and PMT comment (Subtask 4.4)
4.E   Draft Memo #7 review and AC comment (Subtask 4.5)
4.F   AC Meeting #4 (Subtask 4.6)
4.G   Draft Memo #8 review and Transit Agency and PMT comment (Subtask 4.7)
4.H   Draft Memo #8 review and AC comment (Subtask 4.8)
4.I   AC Meeting #5 (Subtask 4.9)
4.J   Project Webpage Update (Subtask 4.10)
4.K   Questionnaire #2 (Subtask 4.11)

Consultant Deliverables
4.A   PMT Meeting #4 (Subtask 4.1)
4.B   Draft Memo #6 (Subtask 4.2)
4.C   Final Memo #6 (Subtask 4.3)
4.D   Draft Memo #7 (Subtask 4.4)
4.E   Final Memo #7 (Subtask 4.5)
4.F   AC Meeting #4 (Subtask 4.6)
4.G   Draft Memo #8 (Subtask 4.7)
4.H   Final Memo #8 (Subtask 4.8)
4.I   AC Meeting #5 (Subtask 4.9)
4.J   Project Webpage Update materials for posting (Subtask 4.10)
4.K   Questionnaire #2 (Subtask 4.11)

Task 5   Draft TDP

Objective: A draft TDP that includes a vision for future transit service, proposes a set of strategies to address unmet transit needs in the Study Area, includes recommendations for strengthening coordination among transit providers, and identifies priorities and a plan for implementation.

Subtasks

5.1   <u>PMT Meeting #5 and Draft TDP Outline</u> – Transit Agency shall organize and Consultant shall lead PMT Meeting #5 to discuss the components and

> **Tip**: The components of a TDP are discussed in Chapter 11: Documentation and Chapter 12: Other Components of the TDP Guidebook.

format of the Draft TDP. Consultant shall prepare a Draft TDP Outline in advance of the meeting to serve as a basis for the PMT discussion. Consultant shall prepare a decision and next steps log, documenting decisions made, notes on the decisions, and next steps defined during the PMT meeting.

5.2   Draft TDP – Consultant shall prepare Draft TDP, building on the work prepared in previous tasks and according to the agreement on components and format reached at PMT Meeting #5. Draft TDP must include maps, charts, and other graphics as necessary to communicate key ideas and must include at a minimum the following elements:
   a. The vision of what transit service can become as developed in Memo #5 and an implementation plan and strategies to achieve the vision;
   b. Updated transit goals, policies, and practices;
   c. Updated transit benchmarks;
   d. Market Analysis and travel patterns
   e. Discussion of future service opportunities and considerations and monitoring program to tract performance of future service opportunities;
   f. Using the benchmarks identified in Memo #8, prioritized TDP services, with the most urgent needs receiving the highest ranking;
   g. Service and capital requirements needed for each service priority;
   h. Financial impact of meeting each service priority and capital needs;
   i. Components of a plan for coordinating transportation systems, schedules, fare media, and marketing with regional partners;
   j. Measures to ensure access to transit is incorporated in future developments within close proximity to transit routes and stops, including potential related local Comprehensive Plan and Development Code amendments;
   k. Process to ensure that Transit Agency is notified of development applications and processes within close proximity to existing or planned transit services, including potential related local Comprehensive Plan and Development Code amendments;
   l. Monitoring program to track performance of the implemented alternatives; and
   m. Appendices as agreed upon in PMT Meeting #5 and any subsequent PMT communications.

Transit Agency and PMT shall review and provide written comments on Draft TDP.

5.3   AC Meeting #6 – Transit Agency shall organize and Consultant shall lead AC Meeting #6 to solicit AC comments on Draft TDP.

5.4   Open Houses #1-4 – Transit Agency shall arrange for Open Houses in four different locations within the Study Area, siting and scheduling them to

encourage widespread and diverse public participation. Consultant shall facilitate Open Houses #1-4 to solicit public comment on the Draft TDP. Consultant shall prepare presentation material, including slide show or graphical displays, informational handouts, copies of Project deliverables, and similar materials needed to adequately and appropriately convey Project information and shall provide a suitable means for gathering and compiling public comment. Open Houses are anticipated to last approximately two hours each and be scheduled over no more than 3 days (two evening and two midday events are one option).

5.5 *Contingent Local Planning Staff Workshop* – *- Must be pre-authorized in writing by APM.* Consultant shall work with Transit Agency staff to schedule and conduct a workshop with Planning or Community Development Directors from communities in the service area to review proposed Comprehensive Plan policy and Development Code amendments, answer questions and discuss how amendments could be refined to be better tailored to each community and ultimately adopted by each jurisdiction.

5.6 Revised TDP – Consultant shall revise Draft TDP to respond to public, AC and PMT comments. Consultant shall provide revised Draft TDP to both Transit Agency and APM. Transit Agency and the consultant will translate the summary of the Revised TDP into Spanish and Transit Agency will post the summary on the webpage.

5.7 Project Webpage Update – Transit Agency shall post and Consultant shall provide Task 5 Webpage materials.

Transit Agency Deliverables
5.A PMT Meeting #5 and Draft TDP Outline review and comment (Subtask 5.1)
5.B Draft TDP review and comment (Subtask 5.2)
5.C AC Meeting #6 (Subtask 5.3)
5.D Open Houses #1-4 (Subtask 5.4)
5.E Contingent Local Planning Staff Workshop (Subtask 5.5)
5.F Project Webpage Update (Subtask 5.7)

Consultant Deliverables
5.A PMT Meeting #5 and Draft TDP Outline (Subtask 5.1)
5.B Draft TDP (Subtask 5.2)
5.C AC Meeting #6 (Subtask 5.3)
5.D Open Houses #1-4 (Subtask 5.4)
5.E Contingent Local Planning Staff Workshop (Subtask 5.5)
5.F Revised TDP (Subtask 5.6)
5.G Project Webpage Update materials for posting (Subtask 5.7)

Task 6   Adoption

Objective: Take the Revised TDP to the Transit Agency Board of Commissioners for adoption.

Subtasks

6.1   <u>Transit Agency Board of Commissioners Work Session #2 </u>– Transit Agency shall schedule and notice a Transit Agency Board of Commissioners Work Session. Consultant shall present key elements of the Revised TDP (presentation format to be determined by Transit Agency) and respond to questions.

6.2   <u>Transit Agency Board of Commissioners Adoption Hearing </u>– Transit Agency shall schedule, notice, and conduct a public hearing to take testimony and consider adoption of the Revised TDP. Transit Agency shall arrange for Public Comment Period, prepare and present staff report, and take official minutes. Consultant shall attend to answer questions, with no formal presentation expected.

6.3   <u>Final TDP</u> – Consultant shall prepare Final TDP, making revisions necessary as a result of the adoption process. Transit Agency and the consultant will translate the summary of the Final TDP into Spanish and Transit Agency will post the summary on the webpage. Consultant shall provide two hard copies and two electronic copies – both .pdf and editable format - to both Transit Agency and APM.

6.4   <u>Final Title VI Report </u>– Transit Agency shall prepare and submit to APM Final Title VI Report that builds on Task 1 Interim Title VI Report and documents Project process and outreach for all income, race, gender, and age groups for the entire Project.

Transit Agency Deliverables
6.A   Transit Agency Board of Commissioners Work Session #2 (Subtask 6.1)
6.B   Transit Agency Board of Commissioners Adoption Hearing (Subtask 6.2)
6.C   Final Title VI Report (Subtask 6.4)

Consultant Deliverables
6.A   Transit Agency Board of Commissioners Work Session #2 (Subtask 6.1)
6.B   Transit Agency Board of Commissioners Adoption Hearing (Subtask 6.2)
6.C   Final TDP (Subtask 6.3)

SCHEDULE

Task # & Description	Project Schedule
Task 1: Project Initiation and Existing Conditions	(Fill in month and year)
Task 2: Land Use Impact on Future Transportation Needs	(Fill in month and year)
Task 3: Envision Future Service Opportunities	(Fill in month and year)
Task 4: Transit Goals Practices and Policies	(Fill in month and year)
Task 5: Draft TDP	(Fill in month and year)
Task 6: Adoption	(Fill in month and year)

> **Tip**: The typical schedule for completion of a TDP is 9 to 15 months per Chapter 2: Getting Started on a TDP of the TDP Guidebook. Resources such as in-house staff time, use of a consultant, and the quality of data will affect the schedule.

CONSULTANT DELIVERABLE TABLE

Task and Deliverable	Total Fixed Amount Payable to Consultant Per Deliverable
Task 1 Project Initiation and Existing Conditions	**$(Fill in total dollar amount for task)**
1.A Project Initiation and Project Management (Subtask 1.1)	$(Fill in dollar amount for subtask)
1.B PMT Meeting #1 (Subtask 1.2)	$(Fill in dollar amount for subtask)
1.C Memo #1 (Subtask 1.3)	$(Fill in dollar amount for subtask)
1.D Draft Memo #2 (Subtask 1.4)	$(Fill in dollar amount for subtask)
1.E Final Memo #2 (Subtask 1.5)	$(Fill in dollar amount for subtask)
1.F Project Webpage Initial Materials (Subtask 1.6)	$(Fill in dollar amount for subtask)
1.G Questionnaire #1 (Subtask 1.7)	$(Fill in dollar amount for subtask)
1.H Stakeholder Small Groups (Subtask 1.8)	$(Fill in dollar amount for subtask)
1.I Transit Agency Board of Commissioners Work Session #1 (Subtask 1.9)	$(Fill in dollar amount for subtask)
1.J Outreach Efforts #1 (Subtask 1.10)	$(Fill in dollar amount for subtask)
1.K AC Meeting #1 (Subtask 1.11)	$(Fill in dollar amount for subtask)

Task and Deliverable	Total Fixed Amount Payable to Consultant Per Deliverable
1.L Study Area Tour (Subtask 1.12)	$(Fill in dollar amount for subtask)
Task 2 Land Use Impact on Future Transportation Needs	**$(Fill in total dollar amount for task)**
2.A Draft Memo #3 (Subtask 2.1)	$(Fill in dollar amount for subtask)
2.B Final Memo #3 (Subtask 2.2)	$(Fill in dollar amount for subtask)
2.C PMT Meeting #2 (Subtask 2.3)	$(Fill in dollar amount for subtask)
2.D AC Meeting #2 (Subtask 2.4)	$(Fill in dollar amount for subtask)
2.E Project Webpage Update materials for posting (Subtask 2.5)	$(Fill in dollar amount for subtask)
Task 3 Envision Future Service Opportunities	**$(Fill in total dollar amount for task)**
3.A Draft Memo #4 (Subtask 3.1)	$(Fill in dollar amount for subtask)
3.B Final Memo #4 (Subtask 3.2)	$(Fill in dollar amount for subtask)
3.C Draft Memo #5 (Subtask 3.3)	$(Fill in dollar amount for subtask)
3.D Final Memo #5 (Subtask 3.4)	$(Fill in dollar amount for subtask)
3.E PMT Meeting #3 (Subtask 3.5)	$(Fill in dollar amount for subtask)
3.F AC Meeting #3 (Subtask 3.6)	$(Fill in dollar amount for subtask)
3.G Project Webpage Update materials for posting (Subtask 3.7)	$(Fill in dollar amount for subtask)
3.H Outreach Efforts #2 (Subtask 3.8)	$(Fill in dollar amount for subtask)
Task 4 Transit Goals Practices and Policies	**$(Fill in total dollar amount for task)**
4.A PMT Meeting #4 (Subtask 4.1)	$(Fill in dollar amount for subtask)
4.B Draft Memo #6 (Subtask 4.2)	$(Fill in dollar amount for subtask)

Task and Deliverable	Total Fixed Amount Payable to Consultant Per Deliverable
4.C Final Memo #6 (Subtask 4.3)	$(Fill in dollar amount for subtask)
4.D Draft Memo #7 (Subtask 4.4)	$(Fill in dollar amount for subtask)
4.E Final Memo #7 (Subtask 4.5)	$(Fill in dollar amount for subtask)
4.F AC Meeting #4 (Subtask 4.6)	$(Fill in dollar amount for subtask)
4.G Draft Memo #8 (Subtask 4.7)	$(Fill in dollar amount for subtask)
4.H Final Memo #8 (Subtask 4.8)	$(Fill in dollar amount for subtask)
4.I AC Meeting #5 (Subtask 4.9)	$(Fill in dollar amount for subtask)
4.J Project Webpage Update materials for posting (Subtask 4.10)	$(Fill in dollar amount for subtask)
4.K Questionnaire #2 (Subtask 4.11)	$(Fill in dollar amount for subtask)
Task 5 Draft TDP	**$(Fill in total dollar amount for task)**
5.A PMT Meeting #5 and Draft TDP Outline (Subtask 5.1)	$(Fill in dollar amount for subtask)
5.B Draft TDP (Subtask 5.2)	$(Fill in dollar amount for subtask)
5.C AC Meeting #6 (Subtask 5.3)	$(Fill in dollar amount for subtask)
5.D Open Houses #1-4 (Subtask 5.4)	$(Fill in dollar amount for subtask)
5.E Contingent Local Planning Staff Workshop (Subtask 5.5)	$(Fill in dollar amount for subtask)
5.F Revised TDP (Subtask 5.6)	$(Fill in dollar amount for subtask)
5.G Project Webpage Update materials for posting (Subtask 5.7)	$(Fill in dollar amount for subtask)
Task 6 Adoption	**$(Fill in total dollar amount for task)**
6.A Transit Agency Board of Commissioners Work Session #2 (Subtask 6.1)	$(Fill in dollar amount for subtask)
6.B Transit Agency Board of Commissioners Adoption Hearing (Subtask 6.2)	$(Fill in dollar amount for subtask)

Task and Deliverable	Total Fixed Amount Payable to Consultant Per Deliverable
6.C Final TDP (Subtask 6.3)	$(Fill in dollar amount for subtask)
TOTAL Non-Contingency + Contingency Deliverables	**$(Fill in total dollar amount for all tasks)**
Total Contingency Deliverables:	**$(Fill in total dollar amount for contingent subtasks)**

Albany Transit Service (ATS) is conducting a survey to help plan future transit services. Please help us by completing this survey and returning it to the driver, or drop it in the mail. **Thank you!**

1.   What bus are you currently riding?

2.   About what time did get on this bus?

3.   How many days per month do you ride ATS ?

4.   At what location did you start your trip today?

Intersection _____ & _____

or   Landmark _____

City _____

5.   How did you get from home to the bus stop today?

1❑ Walked _____ blocks   3❑ Drove and parked

2❑ Dropped off by car   4❑ Other: _____

6.   Do you need to transfer to complete this trip?

1❑ No, I don't transfer   5❑ Yes, I use Linn Shuttle

2❑ Yes, I use Valley Retriever   6❑ Yes, I use multiple ATS routes

3❑ Yes, I use Linn-Benton Loop   7❑ Yes I use: _____

4❑ Yes, I use Anthony's Airporter

7.   Where is your bus trip destination today?

Intersection _____ & _____

or   Landmark _____

City _____

Please Continue…

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES
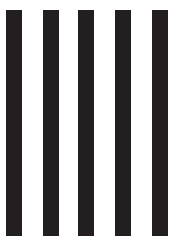
8. What is the purpose of your trip today?

1 ❏ Work   4 ❏ Medical appointment

2 ❏ School   5 ❏ Other: _____

3 ❏ Shopping   _____

9. How do you typically pay your fare when riding the ATS service (check one)?

1 ❏ Cash   3 ❏ Monthly Pass

2 ❏ Ticket   4 ❏ Other: _____

10. Please circle the number that best describes how you would rate ATS rider services, where 1 = Poor and 5 = Excellent.

	Poor				Excellent
a. Service that is on-time	1	2	3	4	5
b. Cleanliness of the vehicles	1	2	3	4	5
c. Frequency of service	1	2	3	4	5
d. Professionalism of the drivers	1	2	3	4	5
e. Value for fare paid	1	2	3	4	5
f. Conveniently located bus stops	1	2	3	4	5
g. Goes where I need to go	1	2	3	4	5
h. Service hours meet my needs	1	2	3	4	5

11. Where do you get information on ATS services?

1 ❏ Website   2 ❏ Bus driver/on-board   3 ❏ Friends/relatives   4 ❏ Neighborhood center
5 ❏ Other: _____

12. Overall, how satisfied are you with ATS services?

1 ❏ Very satisfied   2 ❏ Somewhat satisfied   3 ❏ Neutral   4 ❏ Somewhat dissatisfied   5 ❏ Very dissatisfied

13. ATS is currently in the process of developing a Transit Plan that will address future transit improvements. What are the top two improvements or changes you would like to see for ATS services?

1) _____

2) _____

14. Did you have a car available to make this trip?

1 ❏ Yes   2 ❏ No

15. What is your age:

1 ❏ Under 18   2 ❏ 18-24   3 ❏ 25-34   4 ❏ 35-49   5 ❏ 50-65   6 ❏ 65 or over

16. What was your household income in 2007?

1 ❏ Under $15,000   2 ❏ $15,000–29,999   3 ❏ $30,000–$44,999
4 ❏ $45,000–$59,999   5 ❏ $60,000–$74,999   6 ❏ $75,000 or more

17. What is your gender:

1 ❏ Male   2 ❏ Female

18. Are you: (check one)

1 ❏ Asian/Pacific Islander   4 ❏ Hispanic/Latino

2 ❏ African-American/Black   5 ❏ Native American Indian

3 ❏ Caucasian/White   6 ❏ Other: _____

19. PLEASE provide any ADDITIONAL COMMENTS below

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Please return survey to the driver, or drop in the mail.

Thank you!

PUBLIC OUTREACH BOARDS

LEARN ABOUT SETD'S LONG RANGE COMPREHENSIVE TRANSPORTATION PLAN

The Sunset Empire Transportation District (SETD) serves communities across Clatsop County, including Clatskanie, Gearhart, Westport, Astoria, Warrenton, Cannon Beach and Seaside. SETD's transit service covers an area of approximately 840 square miles and 36,000 citizens. More than 180,000 trips per year are taken on the bus within Clatsop County and to neighboring Tillamook County, Longview, Columbia County and Portland.

What's YOUR preference?

Transit providers must balance competing needs. Some people want the bus to run every 15 minutes. Some people want the bus to run until 10 pm. A transit agency can often do one of those things, but not both. What matters most to **you**?

TRANSIT NEEDS	CATEGORY A	← OR →	CATEGORY B
COVERAGE	Provide less frequent service to more areas	←→	Provide more service to fewer areas
FREQUENCY & SPAN	Provide more frequent service for a shorter time	←→	Provide less frequent service, but for a longer time
DAYS OF SERVICE	Provide less weekday service; more weekend service	←→	Provide faster, more direct service that requires longer walks to stops
TRANSFERS	Provide more routes with less frequent service, but fewer transfers	←→	Provide fewer routes with more frequent service, but more transfers
DIRECTNESS	Provide slower, less direct service with shorter walks to stops	←→	Provide more weekday service; less weekend service
STOP SPACING	Serve many stops that make service slower, but reduce walks	←→	Serve fewer stops to speed service, but that increase walks

Project Purpose

This project will guide the future of transit service in Clatsop County for the next 20 years. The project will help us determine:

- What is the role of transit in Clatsop County?
- Does the bus run when and where people need it?
- How to better connect people regionally – to Tillamook County, Portland, and Columbia County, for example?
- How can SETD improve customer access to the bus, including service changes, technology upgrades, increased marketing, etc.?

Project Outcomes

Recommendations will include modifications to:

- Route alignments
- Route schedules
- Route frequencies
- Marketing and information
- Service standards and performance metrics
- Fare payment systems
- Organization structure
- Bus stops (lighting, shelters, signs)
- Linking land use and transportation investments

Schedule

This project began in March 2015 and will be completed by July 2016.

Project Tasks

- Plan review – understand previous projects affecting transit service
- Market analysis – map locations of people, jobs, and activity centers (grocery stores, senior centers, apartments, social services, etc.)
- Service analysis – assess SETD route efficiency and effectiveness
- Rider survey – understand the needs of current riders
- Community survey – understand the needs of people not currently riding
- Outreach – talk to the public about transportation needs
- Service options – create service recommendations to meet needs
- Goals and policies – update agency goals to reflect community values
- Benchmarks – performance standards for successful transit

Please give us your feedback!

Take an online survey about public transit in Clatsop County by July 15 and be entered into a drawing for a $50 gift card. Access the survey at:

TRANSITSTUDY.RIDETHEBUS.ORG/SURVEY

For More Information

Jeff Hazen
Executive Director
Sunset Empire Transportation District
900 Marine Drive | Astoria | OR | 97103
Jeff@ridethebus.org

SUNSET EMPIRE TRANSPORTATION DISTRICT
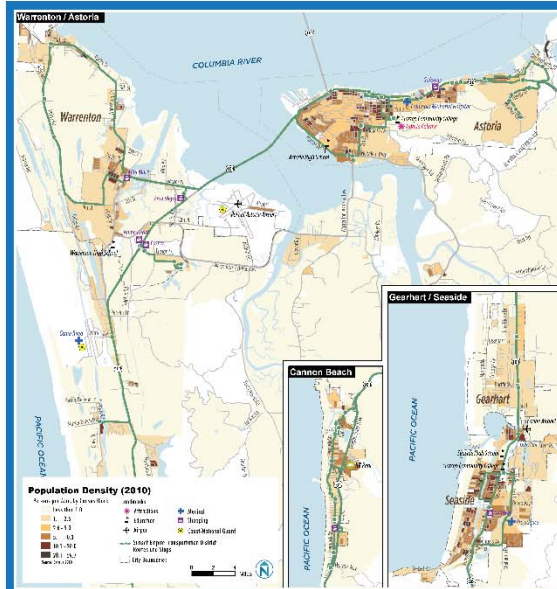
Where do people live?

- Successful transit relies on a density of people.
- Astoria is home to 26% of the county's population
- Population density is low, with **45 people per square mile**

The Clatsop County community

- Clatsop County is home to **37,000 people** and covers **1,084 square miles**
- From 2000 to 2010, county **population grew by 4%**
- Growth has been fastest in Seaside (9%) and Warrenton (22%)
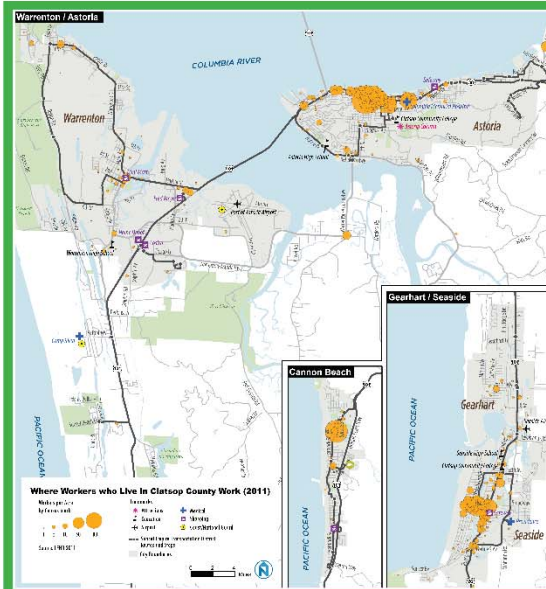
Where do people commute to and from?

People typically travel to work five days per week. Capturing work trips by transit can therefore give the system a solid base of ridership.

Location of Jobs

- 46% of Clatsop County residents work in Clatsop County
- 8% work in Portland

Major Employers

Georgia Pacific/ Wauna Mill (Westport)
Columbia Memorial Hospital (Astoria)
Providence Seaside Hospital (Seaside)
Clatsop County (Astoria)
Fred Meyer (Astoria)
Tongue Point Job Corps Center (Astoria)
Clatsop Community College (Astoria)
City of Astoria
Clatsop Care Center (Astoria)
Bornstein Seafoods (Astoria)
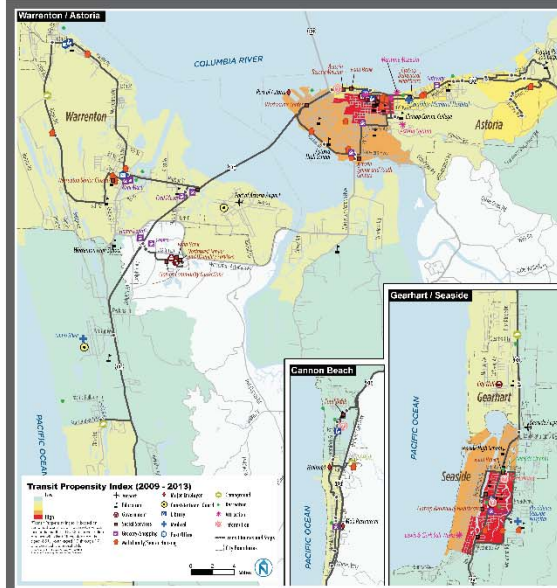
Where do people who rely on transit live?

Certain demographic characteristics lead people to rely more on transit than others. If a person is low income, has a disability, is too young to drive, is over 65, or does not own a car, they are much more likely to take transit. Using the Census, densities of each of these demographics was tallied and mapped on a scale of low to high transit reliance.
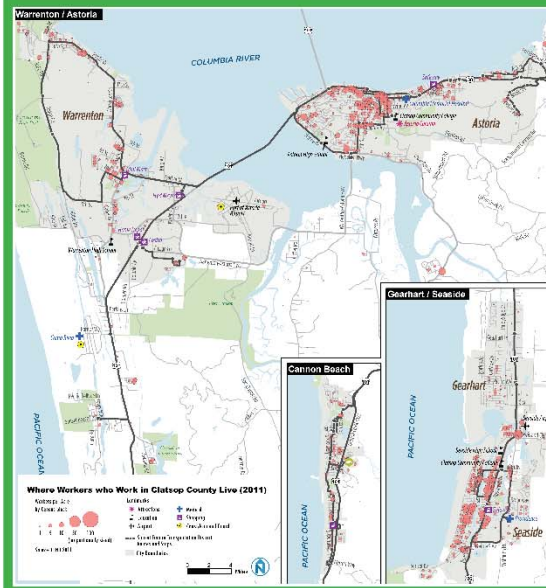
Where do workers live?

- 27% of workers live in Astoria/Warrenton
- 3.7% of Clackamas County workers live in Tillamook and Lincoln Counties

WHERE CAN YOU CATCH THE BUS?

SETD provides year-round transit service throughout Clatsop County.

Weekday Service
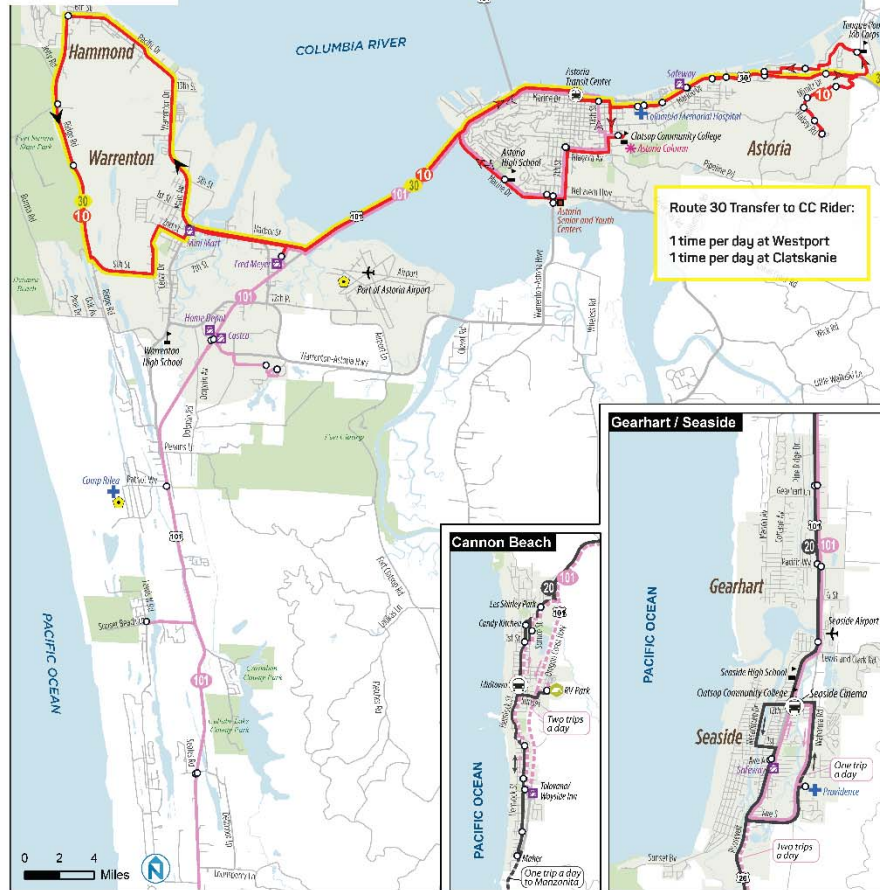
Route 30 Transfer to CC Rider:

1 time per day at Westport
1 time per day at Clatskanie
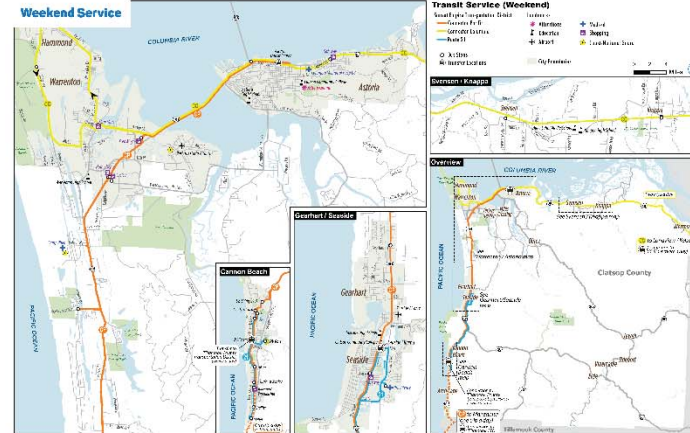
Weekend Service

Seasonal Weekday Service

The Highway 101 corridor and surrounding communities become different during the summer. Seasonal employment and tourism affects how, when, and where people travel.

PUBLIC OUTREACH FLYERS AND SIGNAGE

WE WANT TO HEAR FROM YOU!

SUNSET EMPIRE
TRANSPORTATION
DISTRICT

COME ON IN!

Sunset Empire Transportation District (SETD) wants your opinions about regional transit service. We provide local and regional bus service and are undertaking a long-range plan to determine the transit need of Clatsop County.

✳ When and where do you need to travel?

✳ How can public transportation help you?

✳ Where can service be improved?

WE WANT TO HEAR FROM YOU!

**SUNSET EMPIRE
TRANSPORTATION
DISTRICT**

Sunset Empire Transportation District (SETD) wants your opinions about regional transit service. We provide local and regional bus service and are undertaking a long-range plan to determine the transit need of Clatsop County.

✳ Where and when do you need to travel?

✳ How can public transportation help you?

✳ Where can service be improved?

Stop by and talk to us as you go about your day:

Friday, June 19th

✳ Youngs Bay Plaza, 2 - 4 pm
145 US 101, Warrenton

✳ Riversea Gallery, 5:30 - 7:30 pm
1160 Commercial St, Astoria

Saturday, June 20th

✳ Seaside Public Library, 10 am- noon
1131 Broadway St, Seaside

✳ Coaster Theatre, 2 - 4 pm
108 N. Hemlock St, Cannon Beach

For more information visit the plan website http://transitstudy.ridethebus.org

ON-BOARD SURVEY, SPRING/SUMMER 2015

Figure A-1   Passenger Survey (English)

Figure A-2   Passenger Survey (Spanish)

SUNSET EMPIRE TRANSPORTATION DISTRICT ENCUESTA DE TRÁNSITO A BORDO

Sunset Empire Transportation District (SETD) está realizando una encuesta para ayudar a planificar el futuro servicio de tránsito en la región. Nos gustaría obtener su entrada sobre sus patrones de viaje y experiencia en tránsito. Las respuestas son totalmente confidenciales.

☐ Marque esta casilla si ha completado esta encuesta en otro viaje. | Solo para uso interno: Time of Survey _____ am pm Route: _____

Por favor, díganos sobre el viaje de ida que usted está haciendo ahora.

1. ¿Hizo trasbordo a este autobús desde otro autobús?
☐₁ No   ☐₂ Sí; De la SETD ruta(s)_____
☐₂ Sí; De otros servicios _____

2. ¿Qué tipo de lugar es su destino?
☐₁ Casa   ☐₃ Compras
☐₂ Escuela/Colegio (sólo estudiantes)   ☐₄ Trabajo
Cuál? Elije uno: ☐₅ Actividad Social, Religiosa, Personal
CCC   MERTS   ☐₆ Servicios Médicos
Tongue Point   ☐₇ Otro, explica:_____
Escuela secundaria
Otro:

3. ¿Dónde comenzó su viaje hoy, antes de llegar a la parada de autobús?
Dirección o punto de referencia: _____
O Intersección _____ & _____
       Calle 1   Calle 2
Ciudad _____ Código postal_____

4. ¿A qué hora abordó el autobús hoy?
_____:_____ ☐₁ AM ☐₂ PM

5. ¿Cómo llegó a la parada de autobús?
☐₁ Caminé/ Utilicé silla de ruedas (¿cuántos minutos?____) y: ☐₅ Usé la bicicleta (¿cuántas millas?____) y:
☐₂ Alguien me recogió   ☐₆ Abordé el autobús con mi bicicleta
☐₃ Conduje solo/a   ☐₇ Estacioné la bicicleta cerca de la parada de autobús
☐₄ Compartí automóvil (viaje grupal)   ☐₈ Otro, explica:_____

6. ¿Está tomando un viaje de ida y vuelta en el autobús hoy?
☐₁ Sí   ☐₂ No

7. ¿Con qué frecuencia utiliza tránsito?
☐₁ Primera vez   ☐₄ 3-4 días/semana
☐₂ Irregularmente/rara vez   ☐₅ 5 o más días/semana
☐₃ 1-2 días/semana

8. ¿Por cuánto tiempo ha sido un pasajero de SETD?
☐₁ Más de 4 años   ☐₃ Menos de 1 año
☐₂ 1 a 4 años   ☐₄ Primera vez en SETD

9. ¿Hará trasbordo a otro autobús?
☐₁ No   ☐₃ Sí; A la SETD ruta(s)_____
☐₂ Sí; A otros servicios

10. ¿Cómo pagó por este viaje de autobús?
☐₁ Adulto Efectivo   ☐₆ SETD pase de un día
☐₂ Boletos de autobús (costo normal)   ☐₇ SETD pase mensual
☐₃ Summer Fun Pass (Pase de verano)   ☐₈ SETD pase anual
☐₄ Pase trimestral estudiantil (K-12)   ☐₉ Pase de Connector de 3 días
☐₅ Pase trimestral estudiantil (Colegio)   ☐₁₀ Pase de Connector de 7 días

11. ¿Recibió un descuento especial de tarifas para su viaje hoy?
☐₁ No   ☐₄ Persona mayor
☐₂ Discapacidad   ☐₅ Estudiante
☐₃ Militar   ☐₆ Joven (bajo 7 años)

12. ¿Qué tipo de lugar es su destino?
☐₁ Casa   ☐₃ Compras
☐₂ Escuela/Colegio (sólo estudiantes)   ☐₄ Trabajo
Cuál? Elije uno: ☐₅ Actividad Social, Religiosa, Personal
CCC   MERTS   ☐₆ Servicios Médicos
Tongue Point   ☐₇ Otro, explica:_____
Escuela secundaria
Otro: _____

13. ¿Dónde termina su viaje hoy, después de llegar a la parada de autobús?
Dirección o punto de referencia:_____
O Intersección _____ & _____
       Calle 1   Calle 2
Ciudad _____ Código postal_____

14. ¿Cómo llegará a su destino?
☐₁ Caminaré/ Usaré silla de ruedas (¿cuántos minutos? ___)   ☐₅ Usaré mi bicicleta (¿cuántas millas?____)
☐₂ Alguien me recogerá   ☐₆ Otro, explica:_____
☐₃ Conduciré solo/a
☐₄ Compartiré automóvil (viaje grupal)

15. Si este servicio de autobuses no estuviera disponible, ¿cómo haría este viaje?
☐₁ Caminaré/Silla de ruedas   ☐₅ Usaré mi bicicleta
☐₂ Conduciré solo/a   ☐₆ No haría este viaje
☐₃ Alguien me llevaría en coche   ☐₇ Otro, explica:_____
☐₄ Taxi

Por favor completa la siguiente página ▶

SUNSET EMPIRE TRANSPORTATION DISTRICT ENCUESTA DE TRÁNSITO A BORDO

16. EVALUACIÓN DEL SERVICIO:
Por favor califique los siguientes sobre el tránsito en su área:

	Mediocre			Excelente
1. Los autobuses salen bastante tarde en la noche	4	3	2	1
2. Los autobuses salen lo suficientemente temprano en la mañana	4	3	2	1
3. Servicio llega en tiempo	4	3	2	1
4. Frecuencia de servicio de lunes a viernes	4	3	2	1
5. Frecuencia de servicio de fin de semana	4	3	2	1
6. Las paradas de autobús son de fácil acceso	4	3	2	1
7. Va donde tengo que ir	4	3	2	1
8. La tarifa es apropiado para el servicio	4	3	2	1
9. Conecta bien a servicio regional	4	3	2	1
10. Las paradas de autobús son seguras y cómodas	4	3	2	1
11. Información sobre el servicio es fácil de encontrar	4	3	2	1

17. Por favor considere las posibles mejoramientos en el servicio que se muestran abajo y selecciona hasta 3 que le ayudaría a elegir a usar tránsito con mayor frecuencia:
☐₁ Servicio más frecuente   ☐₈ Servicio a nuevas áreas (Específique:_____)
☐₂ Servicio más temprano en la mañana (desde cuando?_____)   ☐₉ Más servicio local
☐₃ Servicio más tarde en las noches (hasta cuando?_____)   ☐₁₀ Mejores conexiones regionales
☐₄ Más servicio el fin de semana   ☐₁₁ Transferencia fácil entre rutas
☐₅ Mejor puntualidad   ☐₁₂ Más paradas de autobus seguras y cómodas
☐₆ Más rutas directas   ☐₁₃ Más información/Más fácil planificar un viaje
☐₇ Tarifas más baratas   ☐₁₄ Nada me incentivará a usar tránsito con mayor frecuencia

Por favor, cuéntanos acerca de usted:

18. ¿Cuál es su edad?
☐₁ 18 o menos   ☐₃ 25-44   ☐₅ 65-74
☐₂ 19-24   ☐₄ 45-64   ☐₆ 75 y mayores

19. ¿Es usted hombre o mujer?
☐₁ Hombre
☐₂ Mujer

20. ¿Es usted… (marque todo lo que corresponda)
☐₁ Trabajador/a de tiempo completo   ☐₆ Estudiante de nivel secundario/preparatoria
☐₂ Trabajador/a de medio tiempo   ☐₇ Jubilado/a o retirado/a
☐₃ Desempleado/a, pero buscando trabajo   ☐₈ Turista/Visitante
☐₄ Desempleado/a, no estoy buscando trabajo   ☐₉ Otro:_____
☐₅ Universidad/Colegio afiliación
☐₄ Estudiante
☐₆ Facultad/personal

21. ¿Qué tan bien habla usted Inglés?
☐₁ Muy bien   ☐₃ Mal
☐₂ Bien   ☐₄ Nada

22. ¿ Cuál es su origen étnico? (marque todo lo que corresponda)
☐₁ Nativo Americano/de Alaska   ☐₅ Hawaiano u otra isla del Pacífico
☐₂ Asiático   ☐₆ Blanco/Caucásico
☐₃ Negro o Afroamericano   ☐₇ Otro: _____
☐₄ Hispano/Latino/Español

23. Incluyéndose usted, ¿cuántos hay en su hogar?
☐₁ Uno   ☐₂ Dos   ☐₃ Tres o más

24. ¿Tiene usted una licencia de conducir válida?
☐₁ Sí   ☐₂ No

25. ¿Cuántos vehículos funcionales están disponibles en su hogar?
☐₁ Ninguno   ☐₃ Dos
☐₂ Uno   ☐₄ Tres o más

26. ¿Cuál fue el ingreso total de su hogar en el año pasado antes de impuestos?
☐₁ Menos de $10,000   ☐₅ $35,000-49,999
☐₂ $10,000-$14,999   ☐₆ $50,000-74,999
☐₃ $15,000-24,999   ☐₇ $75,000-99,999
☐₄ $25,000-34,999   ☐₈ $100,000 o más

¿Otros comentarios?

¡Gracias por su participación! Sus respuestas son totalmente confidenciales.
Por favor devuelva esta encuesta al inspector o conductor a bordo de este autobús.

COMMUNITY SURVEY, DECEMBER 2015

Figure A-3   Community Survey

Now we have a few questions about you. Your answers will be kept confidential and responses will only be reported in the aggregate.

11. Are you ... Choose all that apply.
___ Full-time worker   ___ College Faculty/Staff
___ Part-time worker   ___ Middle/High School Student
___ Unemployed   ___ Retired
___ Seeking work   ___ Visitor
___ Not seeking work   ___ Other: _____
___ College Student

12. What is your age?
___ 17 or under   ___ 25-44   ___ 65-74
___ 18-24   ___ 45-64   ___ 75 and over

13. What is your ethnicity?
___ American Indian/Alaska Native
___ Asian
___ Black/African American
___ Hispanic/Latino/Spanish
___ Native Hawaiian/Pacific Islander
___ White/Caucasian
___ Other

14. What was your total household income last year before taxes?
___ Less than $10,000   ___ $35,000-49,999
___ $10,000-14,999   ___ $50,000-74,999
___ $15,000-24,999   ___ $75,000-99,999
___ $25,000-34,999   ___ $100,000 or more

15. Including yourself, how many people are there in your household?
___ One   ___ Two   ___ Three or more

16. How many working vehicles are available to your household?
___ None   ___ 1   ___ 2   ___ 3 or more

Thank you for your participation! Survey takers will be entered into a drawing for a **$50 Visa gift card!** If you are interested in participating, please provide your name and phone number.

Name:_____

Phone: _____

Please tape or staple closed before mailing. Thank you!

NELSON\NYGAARD CONSULTING ASSOCIATES
ATTN: STEPHANIE WRIGHT
621 SW MORRISON ST STE 1250
PORTLAND OR 97205-3815

We want to hear from you!

SUNSET EMPIRE TRANSPORTATION DISTRICT

Help us envision the future of public transportation in Clatsop County! The Sunset Empire Transportation District (SETD) provides local and regional bus service and has undertaken a long-range plan to determine transit needs throughout Clatsop County.

We need your opinions on local and regional needs for public transportation services and hope you can participate in this short survey.

This survey should take approximately 5 minutes to complete. For more information on the plan, visit *http://transitstudy.ridethebus.org/*.

Para obtener una copia en español, llame al 503-488-2232.

1. What city/ZIP code do you live in?

City _____

ZIP _____

2. What are the closest cross streets to your home?

Street 1 _____

Street 2 _____

3. Please tell us where you usually travel. List the top THREE places and addresses.
Examples: Work   1095 Duane St, Astoria
           Shopping   Safeway, Seaside

Destination 1: _____
              Name
_____
Address   City/Town

How often do you go there?
___ 5 or more days/week   ___ 2-4 days/week
___ 1 day/week   ___ A few times a year
How do you usually get there?
___ Drive   ___ Dropped off   ___ Taxi   ___ Bike
___ Walk   ___ Public Transit ___ Carpool
___ Agency Transportation (social services/volunteers)
    Who? _____

Destination 2: _____
              Name
_____
Address   City/Town

How often do you go there?
___ 5 or more days/week   ___ 2-4 days/week
___ 1 day/week   ___ A few times a year
How do you usually get there?
___ Drive   ___ Dropped off   ___ Taxi   ___ Bike
___ Walk   ___ Public Transit ___ Carpool
___ Agency Transportation (social services/volunteers)
    Who? _____

Destination 3: _____
              Name
_____
Address   City/Town

How often do you go there?
___ 5 or more days/week   ___ 2-4 days/week
___ 1 day/week   ___ A few times a year
How do you usually get there?
___ Drive   ___ Dropped off   ___ Taxi   ___ Bike
___ Walk   ___ Public Transit ___ Carpool
___ Agency Transportation (social services/volunteers)
    Who? _____

4. Are there places you wish you could go, but cannot because of lack of transportation?
___ No   ___ Yes
If yes, please list the destination and town.
Place 1: _____
Place 2: _____

5. Do you have access to an automobile?
___ No
___ Yes
___ Yes, but not on a regular basis

6. Have you taken public transit in the past year?
___ Yes →   ___ No →

7. If yes, which service did you ride?
Choose all that apply.
___ SETD "The Bus"
___ CC Rider
___ NW Point
___ Tillamook "The Wave"
___ TriMet
___ Other: _____

7a. Which SETD route(s) have you taken in the past year? Choose all that apply.

Weekday
___ Rt 10 (Warrenton-Astoria)
___ Rt 101 (Astoria-Warrenton-Seaside-Cannon Beach)
___ Rt 30 (Warrenton-Astoria-Svensen-Knappa-Westport-Clatskanie)
___ Rt 20 (Seaside-Cannon Beach)
___ Dial-a-Ride
    ___ Warrenton/Jeffers Garden/Miles/Crossing
    ___ Svensen/Knappa
___ Ride Assist

9. If no, why isn't public transportation a good option for you?
Choose all that apply.
___ Doesn't run when I need it
___ Doesn't go where I need it
___ Takes too long
___ Is not available near me
___ Feels uncomfortable/unsafe
___ Bus is not reliable
___ Fare is too expensive
___ Prefer to drive
___ Other: _____
    continue here →

Saturday/Sunday
___ Rt 101 (Astoria-Warrenton-Gearhart-Seaside-Cannon Beach-Manzanita)
___ Rt 30 (Warrenton-Astoria-Svensen-Knappa- Westport-Clatskanie-Longview-Kelso)
___ Rt 21 (Seaside-Cannon Beach)
___ Ride Assist

Seasonal
___ Rt 11 (Astoria)
___ Rt 12 (Astoria)
___ Seaside Streetcar Trolley (Seaside)
___ Rt 21 (Seaside-Cannon Beach)

8. If yes, how often do you ride transit?
___ 5 or more days/week
___ 3-4 days/week
___ 1-2 days/week
___ Rarely
    ↓ continue below ↓

10. What would encourage you to try public transportation or use it more often?
___ More frequent bus service
___ Bus service ran earlier in morning
    Beginning when? _____
___ Bus service ran later at night
    Until when? _____
___ More service on weekends
___ Better on-time performance/more reliable buses
___ More direct bus routes
___ Fares were less expensive
___ Service to new areas
    Specify: _____
___ More local service
___ Better regional connections
___ Easier transfers between routes
___ Safer/more comfortable bus stops
___ Safer access to bus stops
___ Better information/easier to plan trip
___ Nothing would encourage me to ride

HOOD RIVER COUNTY TRANSIT MASTER PLAN

What is CAT?

Columbia Area Transit (CAT) is the transit provider for Hood River County, providing intercity fixed-route bus service to Portland and The Dalles in addition to general public Dial-A-Ride service.

Flickr user Sam Beebe
https://creativecommons.org/licenses/by/2.0/legalcode

What is the Purpose of the Transit Master Plan?

- Understand existing transit services and markets for future transit service development.

- Identify and prioritize opportunities for transit service expansion.

- Detail a plan for near-term transit service development and related investments.

- Develop a vision for transit in Hood River County over the next twenty years.

Plan Timeline

AUG 2016
SEPT 2016
Understand current transit conditions, demographics, and gaps in service

OCT 2016
Outreach: Online survey and tabling at Farmers Market and Walmart

NOV 2016
Transit Master Plan framework

FEB 2017
We Are Here
Develop transit service alternatives
Public Engagement

MAR 2017

APR 2017
Develop transit operations and funding plan

MAY 2017
Transit Master Plan Final Report

Let's improve how we get around, together.

Transportation System Plan Update & Transit Development Plan Now Underway

The TSP is a long-range document that guides the expansion and operations of our transportation network for all modes of travel over the next 20 years. This process creates an opportunity to work with residents and businesses to shape the future of the ways people get around in Corvallis - including, bicycles, sidewalks and trails, vehicles, transit and freight. In conjunction with the TSP update, the City will develop a Transit Development Plan, which will inform investment in the Corvallis public transportation system.

Why Update the TSP?

The City's current TSP was adopted in 1996 and it needs to be updated to reflect the latest community vision, current infrastructure systems, and new growth projections. An updated TSP will enable the City to more effectively compete for limited federal and state funds by establishing clear support for specific transportation priorities.

Tell us how you would improve transportation in Corvallis.

Find the online comment form and more at:
CorvallisTSP.org

About the Transit Development Plan

Corvallis' transit system is an important part of the transportation network and daily life. In order to improve overall transit performance and meet the evolving needs of the community, the City is developing a TDP. It will include analysis of the existing operational and maintenance needs and will provide an assessment of the stability and sustainability of the City's transit funding. The TDP will also provide guidance to the future operation and maintenance of the City's fareless transit system.

Factsheet - May 2015

CorvallisTSP.org

Anticipated Project Schedule

2015				2016				2017			
Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall

Understand
- Discuss community values and transportation goals
- Develop performance measures and evaluation
- Evaluate existing conditions and future growth trends
- Coordinate with state and regional plans

Evaluate
- Develop draft solutions – for all modes of travel
- Evaluate and refine draft solutions through community outreach

Recommend/ Adopt
- Prepare Draft TSP and Transit Development Plan
- Hold Public Adoption Hearings (TSP)
- City Council Adopts TSP

Online Survey

Topic-Specific Workshops & Open House

Topic-Specific Workshops & Open House

Public Hearings

Ongoing Community Briefings & Outreach

⬤ Steering Committee Meeting   ◻ City Council Briefing

Tell us what you think

Attend a meeting or event

Invite us to present

Sign up for email updates

facebook.com/ tspcorvallis

@Corvallistsp

Get more details on upcoming events, meetings, and other project updates at:

CorvallisTSP.org

Contact

Robyn Bassett
Public Works Project Manager, City of Corvallis
(541) 754-1780, robyn.bassett@corvallisoregon.gov

CORVALLIS ENHANCING COMMUNITY LIVABILITY

Oregon Department of Transportation