

CITY OF DANVILLE

2045 LONG RANGE TRANSPORTATION PLAN

SHAPING OUR REGION'S FUTURE, TOGETHER

Month, Day, 2020



Danville MPO 2045 Long Range Transportation Plan



Acknowledgements

The 2045 Transportation Planning Process spanned eighteen months, from spring 2019 to summer of 2020. During that time, numerous local and regional officials, state agencies, stakeholders and members of the public were involved in this process. The Danville Metropolitan Planning Organization expresses its gratitude to those who guided, staffed and influenced the development of this 2045 Long Range Transportation Plan.

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Disclaimer

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Acceptance of this report as evidence of fulfillment of the objectives of this planning study does not constitute endorsement/approval of the need for any recommended improvement, nor does it constitute approval of their location and design or a commitment to fund any such improvements. Additional project level environmental impact assessments and/or studies of alternatives may be necessary.

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List of Acronyms

AADT: Annual Average Daily Traffic

ADA: Americans with Disabilities Act

ADAAG: Americans with Disabilities Act Accessibility Guidelines

CAC: Customer Advisory Committee

CLT: Charlotte Douglass International Airport

CoSS: Corridors of Statewide Significance

CTAF: Common Traffic Advisory Frequency

CTB: Commonwealth Transportation Board

DAN: Danville Regional Airport

DMPO: Danville Metropolitan Planning Organization

DRPT: Department of Rail and Public Transportation

DT: Danville Transit

FAA: Federal Aviation Administration

FTA: Federal Transit Administration

GLTC: Greater Lynchburg Transit Company

LODES: Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics

LOS: Level of Service

LRTAG: Lynchburg Regional Transportation Advocacy Group

LRTP: Long Range Transportation Plan

LYH: Lynchburg Regional Airport

MPA: Metropolitan Planning Area

MPO: Metropolitan Planning Organization

OIPO: Office of Intermodal Planning and Investment

PSI: Potential for Safety Improvements

PTI: Piedmont Triad International

ROA: Roanoke-Blacksburg Regional Airport

RLRP: Rural Long Range Plan

SPS: Statewide Planning System

TAC: Transportation Advisory Committee

TDM: Travel Demand Management

TDM: Travel Demand Model

TDP: Transit Development Plan

VDOT: Virginia Department of Transportation

VMT: Vehicle Miles Traveled

VOC: Volume to Capacity Ratio

WPPDC: West Piedmont Planning District Commission

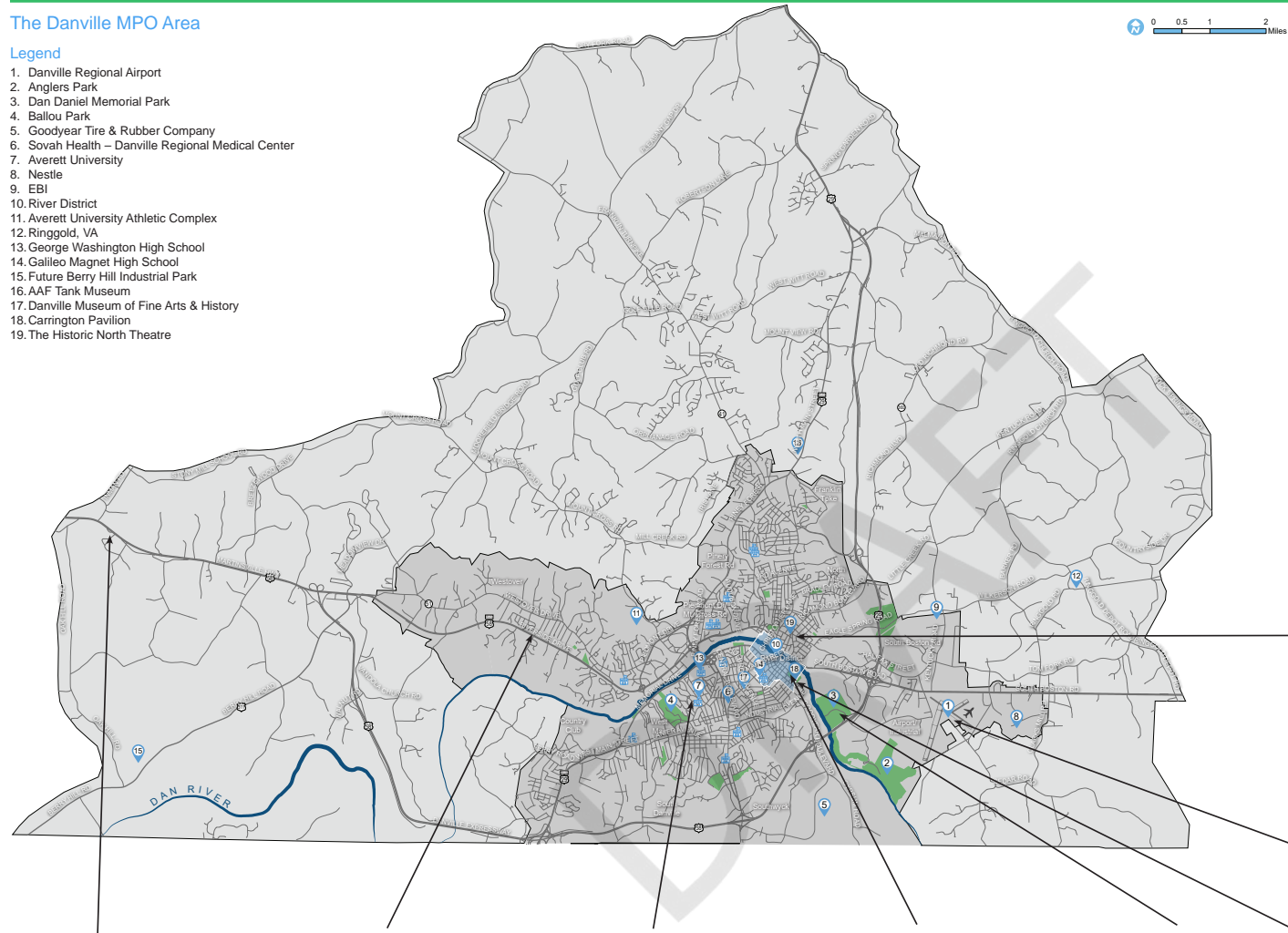
Regional Map

Danville MPO 2045 Long Range Transportation Plan

The Danville MPO Area

Legend

1. Danville Regional Airport
2. Anglers Park
3. Dan Daniel Memorial Park
4. Ballou Park
5. Goodyear Tire & Rubber Company
6. Sovah Health – Danville Regional Medical Center
7. Averett University
8. Nestle
9. EBI
10. River District
11. Averett University Athletic Complex
12. Ringgold, VA
13. George Washington High School
14. Galileo Magnet High School
15. Future Berry Hill Industrial Park
16. AAF Tank Museum
17. Danville Museum of Fine Arts & History
18. Carrington Pavilion
19. The Historic North Theatre



Regional Connections

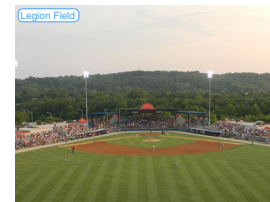
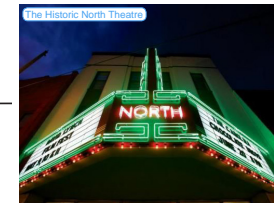
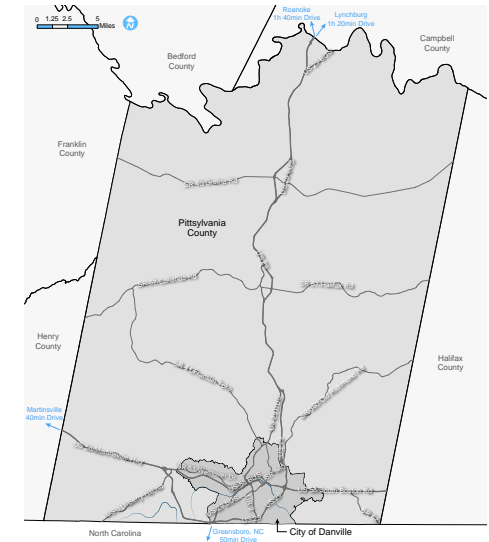


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Executive Summary

Long Range Transportation Plans or LRTPs, are regional transportation documents that are central functions of Metropolitan Planning Organizations. These plans examine transportation trends and concerns, providing a list of future construction projects that will address the region's movement of people, goods, and services. LRTPs may be amended at any time, based on changes in federal guidance or evolving transportation needs, as well as changes in federal, state, and local funding. The LRTP provides the framework and vision for an urbanized region's transportation program.

Danville MPO

The Danville Metropolitan Planning Organization (D-MPO) is the official transportation planning agency for the City of Danville and urbanized areas of Pittsylvania County – this boundary also encompasses areas that are anticipated to become urbanized in the coming decades. MPO's are required by federal law, guiding transportation decisions in urbanized areas of at least 50,000 residents. These organizations qualify transportation projects for federal funding on highways, transit, bike and pedestrian, and multimodal capital investments.

The West Piedmont Planning District Commission (WPPDC) houses D-MPO, staffing the MPO Policy Board, the policymaking body for the MPO. D-MPO is the forum for continuing, cooperative and comprehensive transportation planning, referred to the Federal Code as the 3-C's.

Long Range Transportation Plans

One of the recurrent responsibilities of D-MPO is maintenance of a Long Range Transportation Plan. This document is a federally

WHAT MPO'S DO



Metropolitan planning organizations (MPOs) are responsible for development of regional long-range transportation plans for the regions they represent in accordance with federal regulation.

"Each such long-range plan shall include a fiscally constrained list of all multi-modal transportation projects, including those managed at the statewide level either by the Department of Transportation or the Department of Rail and Public Transportation. The purpose of the regional long-range transportation plan is to comply with federal regulations and provide the MPOs and the region a source of candidate projects for use by the MPOs in developing regional Transportation Improvement Programs (TIPs) and serving as an input to assist the Commonwealth with the development of the Statewide Transportation Plan (VTrans)."

Code of Virginia: § 33.2-3201. Transportation planning duties and responsibilities of Metropolitan planning organizations.

mandated plan that outlines the region's priority transportation improvements for the ensuing decades. For the MPO area, also called the Metropolitan Planning Area (MPA), the LRTP is a fundamental and critical document that unlocks federal funding for the region's transportation investments. Without the LRTP, these federal funds would be unavailable, causing most transportation projects to be too expensive for local or even state coffers.

A Constrained Plan

The LRTP is a constrained plan, which means that the MPO anticipates how much transportation funding it may receive over the next two decades. The MPO calculates the cost of transportation improvements and lists those projects that fit within the budget of anticipated funding. Any projects that cannot fit in the long range budget are moved to an unconstrained Visioning List. Review CHAPTER IX for the constrained list of projects, referred to as the Constrained Long Range Plan (CLRP).

A Collective Transportation Vision

The LRTP sets a collective vision for the region's future transportation system, then identifies projects that are intended to achieve regional goals and objectives. Federal Code requires that the plan consider all modes of transportation, including private vehicles, public transit, bicycle and pedestrian improvements, and other modes. LRTPs can also address issues such as bridge maintenance and air travel. Per federal mandate, the LRTP must be updated every five years. This document is the five-year update for the horizon year 2045.

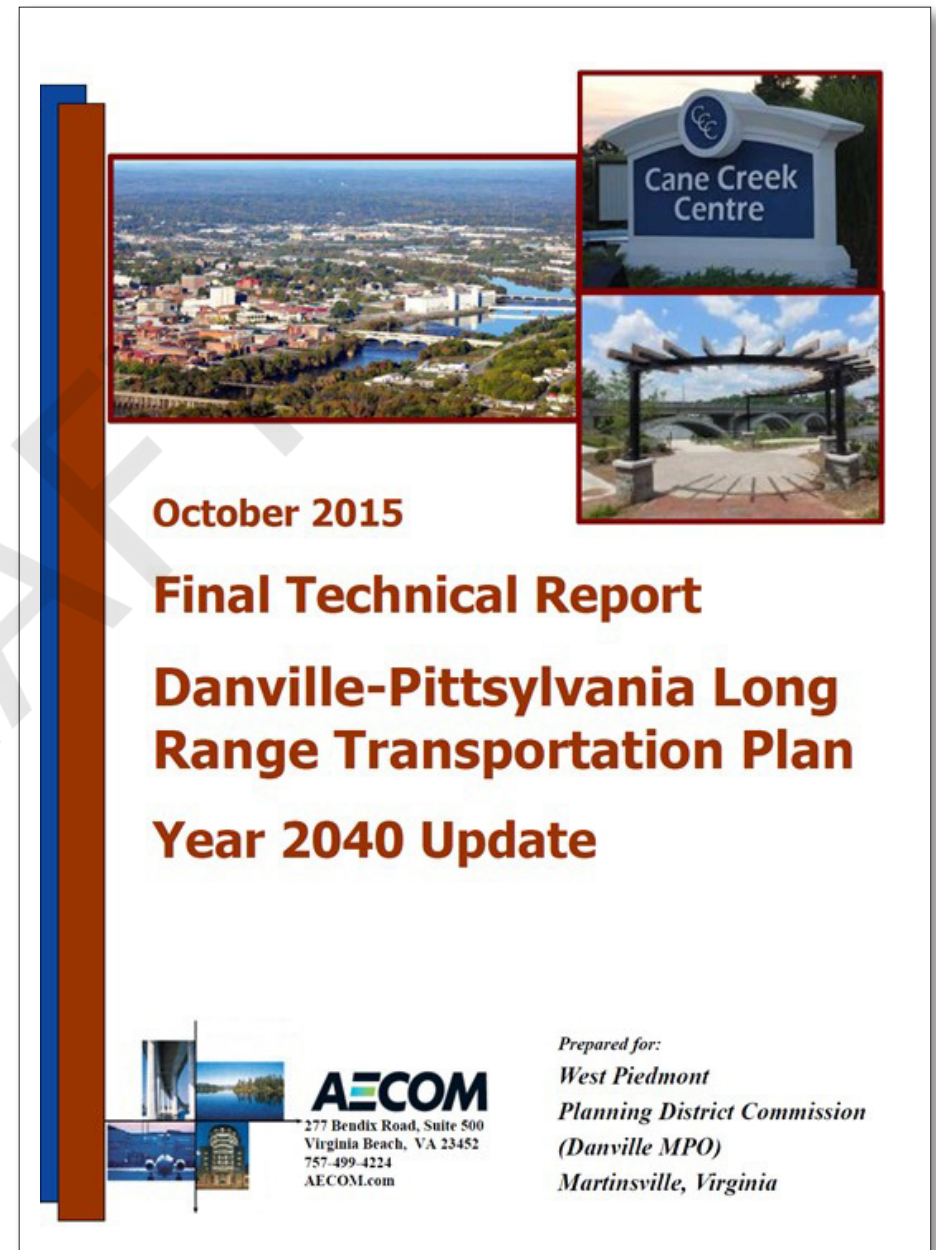
The 2040 LRTP

In the previous version of the LRTP, D-MPO approved the 2040 LRTP in October 2015 (Figure 1). This plan anticipated transportation needs through the year 2040. A performance-based project evaluation process was a core element that resulted in a Constrained List of ten roadway projects and a Visioning List of twenty-nine transportation projects. The plan also included typical roadway section, discussions on transit service, considerations for aviation service, and an evaluation of alternative transportation modes. In that plan, D-MPO organized projects and policies by the eight Federal Planning Factors listed under MAP-21 legislation, discussed more in CHAPTER I. A unique aspect of the 2040 plan was a performance-based process that considered funding programs. Virginia had recently established House Bill 2 (HB2), which set a data-driven process for selecting the most cost-effective transportation solutions across the Commonwealth. That program, now known as SMART SCALE, was a key consideration in the 2045 plan, as well.

The 2045 Plan

In the 2045 update of the LRTP, D-MPO has built on successful elements of the previous plan, then introduced various new features that are intended to address new challenges faced by the region and Commonwealth. In this process, the EPR, P.C. consulting team identified common shortfalls with LRTP documents, based on an analysis of all fifteen plans in Virginia (for the fifteen Virginia

Figure 1 The Danville MPO 2040 LRTP



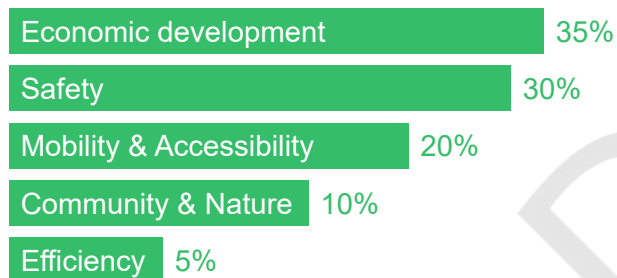
MPOs) and other MPOs across the country. The team designed new approaches to bring greater value to the MPO area and even the surrounding region. Below are some of the innovations found in the 2045 process and this document.

Note: D-MPO secured the consulting services of EPR, P.C. to develop the 2045 LRTP. Kimley-Horn was the subconsultant and provided modeling serves with the Travel Demand Model (TDM). This document refers to the consulting firms by name or by simply denoting them as the “consultants.”

Goals and Enhanced Performance Measures

The 2040 LRTP included performance measures but lacked overarching goals that guided transportation decision-making. In this update, D-MPO approved five 2045 goals (**Figure 2**) supported by fifteen performance measures. The measures served as project scoring sheets that offered a more sophisticated project evaluation process that aligned with funding processes, federal guidelines, and

Figure 2 2045 Goals and weights for scoring projects



local policies. With these tools, the MPO determined the degree to which various transportation improvements accomplished the region’s vision, goals, and objectives. Learn more about the goals, measures, and Project Evaluation Tool in CHAPTER VI.

A Focus on Implementation

There was a renewed focus on project implementation which grew out of the necessity to confront declines in state and federal transportation funds. Knowing that there will be increased competition for these

scarce resources, EPR, P.C. developed a three-fold approach to increasing the success of securing transportation funds for the Danville/Pittsylvania region.

1. **Project Evaluation:** The project evaluation phase included performance measures that mimicked state funding programs. This allowed the MPO to identify high-priority projects that needed further refining, serving as a “test run” for funding applications, such as SMART SCALE.
2. **Funding Selection:** The 2045 LRTP took an unprecedented approach by pairing projects with potential funding sources, then detailing next steps for preparing projects for future applications.
3. **Strategic Planning:** The plan incorporates an entirely new concept of a Short Range Transportation Plan (SRTP) or D-MPO Strategic Planning. While the project evaluation process scores projects, the plan sets a schedule for when projects will be submitted to various funding processes. The plan also includes information that MPO staff can enter directly into funding applications. If there are any missing elements to a potential funding submittal, the plan sets a schedule of next steps to prepare projects for application.

Interconnectedness

Rather than assessing the benefits of individual projects in an isolated manner, proposed projects were combined into scenarios, tested as a system, and compared with other project groupings through a method of performance measure analysis.

Detail and Guidance on Projects

LRTP project lists are traditionally vague. These plans consist of a list of deficiencies or improvements with general project costs assumed. Since Virginia’s funding programs now require more detailed project descriptions and accurate cost estimates, the 2045 plan includes extensive details for all recommended projects. This resulted in a higher level of confidence with anticipated costs and greater clarity on project descriptions.

Functional Visioning Lists

Typically, the Visioning List is a catchall for all projects and concepts not included in the Constrained List (CLRP). Consequently, Visioning Lists are rarely organized in a meaningful way. These “runner up” projects also include unvetted concepts with varying degrees of feasibility. The 2045 Plan gave additional attention to the Visioning List, since those projects can qualify for funding under Virginia’s SMART SCALE process. The non-constrained projects are organized into meaningful categories. The non-constrained lists also offer guidance for MPO officials on next steps, maintenance of the plan, cost estimates, ties to the Unified Planning Work Program (UPWP) and other useful direction. Rather than an after-thought, the 2045 Visioning Lists are a central component to the plan. Refer to CHAPTER IX.

A Strategic Elements and Direction

A new element to the plan that is thought to be unique to this LRTP is a Short Range Transportation Plan (SRTP) that serves as a strategic plan for project implementation. The SRTP details strategies, timing, schedules, and guidance on how to advance projects through funding processes. This new element plans funding-related activities for a three-year period and should be updated annually. Refer to APPENDIX ____.

Typical Road Sections and Modal Emphasis

Continuing from the 2040 LRTP, this update depicts typical road sections to help guide roadway design and modal split of key transportation corridors. The LRTP illustrates this information with an MPO-wide map that shows desired modal emphasis by corridor. Refer to CHAPTER VIII.

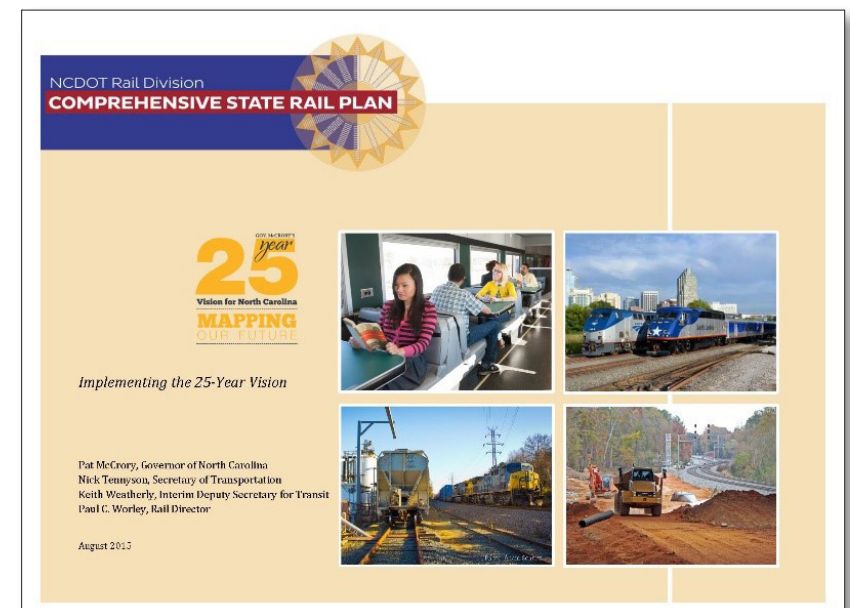
Considerations Beyond MPO Boundaries

Another shortfall of LRTPs is a “tunnel vision” focus on the MPA. Most plans include a map of the MPO boundaries that ignores anything beyond the urbanized area, as if the metropolitan transportation network were a closed system. In reality, Rural Transportation Programs can greatly influence MPOs, as rural and metropolitan areas are intrinsically linked. In response, the 2045 LRTP incorporates elements of the recently approved Rural Long Range Plan (2045

Figure 3 The Danville MPO 2040 RLTP



Figure 4 Considerations for transportation plans in North Carolina



RLRP) (Figure 3). Most notably, the Visioning List of projects includes a category of rural recommendations that could directly influence the MPO. The Visioning List also recommends joint rural-MPO studies. The LRTP also incorporates considerations from across the state line (Figure 4), since the region has strong ties to North Carolina.

Enhanced Economic Considerations

Callout boxes and sidebars reference the region's Comprehensive Economic Development Strategies (CEDs) Plan. Recommendations

User-Friendly Format

The 2045 Plan embraces the way people use LRTPs. Rarely does anyone read a Long Range Transportation Plan from cover to cover. Also, as a public document that is critical to the region, the MPO emphasized that this plan should be easy to read and navigate. To accomplish this, the plan includes guidance on how to use this document as a resource. Callout boxes reference other documents and define important terms. Hyperlinks (for electronic versions) and

Figure 5 Color-coded call out boxes

THE WEST PIEDMONT ECONOMIC DEVELOPMENT DISTRICT, COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGIES (2019)

“The Economic Development Administration Reform Act of 1998 identifies a CEDS as a requirement to apply for assistance under the EDA Public Works and Economic Adjustment Programs... The purpose of the CEDS is to establish a process that will help create jobs, foster more stable and diversified economies, and improve living conditions. It is a continuous planning process that addresses the economic problems and potentials of an area, providing a blueprint to strengthen economies through regional strategies which focus on economic and workforce development, quality of life, transportation and other vital infrastructure.”

CEDS Goals
Goal 2: Improve infrastructure needed to grow the regional economy... 2.4 Improve regional multimodal transportation infrastructure; provide adequate transportation services; preserve, promote, and enhance transit systems

\$

INFORMATION BOXES

Blue information boxes provide detail to inform the reader. As there are various degrees of transportation knowledge for readers, these boxes help to keep the main text streamlined. The information icon denotes this content.

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QUESTION BOXES

Gray question boxes answer Frequently Asked Questions that arise when reading an LRTP. The boxes may direct the reader to other documents, provide guidance to MPtO officials, or provide hyperlinks/page references of where to find answers.

?

ECONOMIC DEVELOPMENT BOXES

Green boxes pull quotes and recommendations from the region's Comprehensive Economic Development Strategies (CEDS) document. These boxes also include other economic development considerations throughout the plan.

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from the CEDs are incorporated throughout this document, communicating the importance of Economic Development in this part of Virginia, and linking plans.

page references direct readers to sections and chapters that would provide answers to their questions. The plan also limits jargon, as much as possible.

As part of the user-friendly format, color-coded callout boxes navigate readers through the plan. Each color and icon represent different topics that may be important to the reader (Figure 5).

A Streamlined Document

Most LRTPs include long narratives that can distract readers from important information. A central goal of the 2045 document was to remove any unnecessary information. This plan also attempts to better emphasize and detail the sections that readers typically use, the project list chapter. As a result, the LRTP narrative is shorter than is common and the information on projects is more extensive.

Public Engagement

Public engagement was a challenge in the 2040 Long Range Planning process. For 2045, the process included new approaches, such as public intercepts, comment postcards, and a MetroQuest survey. This public input played an important role in all aspects of the process, from validating the goals and performance measures to project selection. Refer to CHAPTER II.

