



# Executive Summary

## Danville-Pittsylvania

### Long-Range Transportation

#### Plan: Year 2035

August 16, 2010



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Danville-Pittsylvania Metropolitan Planning Organization  
West Piedmont Planning District Commission

**Danville-Pittsylvania Area  
Long-Range Transportation Plan  
Year 2035**

**EXECUTIVE  
SUMMARY**

**August 16, 2010**

*Developed by*  
**Danville-Pittsylvania Metropolitan Planning Organization**

*In cooperation with*  
*The Virginia Department of Transportation*  
*The Virginia Department of Rail and Public Transportation*  
*The Federal Highway Administration*  
*The Federal Transit Administration*

*The contents of this report reflect the view of the author(s) who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the views or policies of the Federal Highway Administration and/or the Commonwealth of Virginia Transportation Board. This report does not constitute a standard, specification or regulation. FHWA 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 improvements nor does it constitute approval of their location and design or a commitment to fund any such improvements. Additional project level environmental studies of alternatives may be necessary.*

*The Danville-Pittsylvania Area Long-Range Transportation Plan: Year 2035* was developed by the Danville Metropolitan Planning Organization (MPO) and the West Piedmont Planning District Commission to provide the City of Danville and the surrounding urbanized areas of Pittsylvania County with a comprehensive set of transportation improvements that will meet both current travel demands and projected travel demands to the year 2035. These improvements encompass all modes of travel, including roadway, transit, rail, air, bicycle, and pedestrian, and were developed through a study process that included:

- Public input garnered through articles, mailings and public meetings;
- Updates to the regional computerized travel demand model;
- Use of standard traffic engineering analysis techniques to determine existing and future roadway capacity and safety deficiencies;
- Analysis of all modes of travel and coordination with transit and intercity bus providers, airport and rail authorities, social service providers, and others involved in regional transportation;
- Development of transportation improvement recommendations to serve the transportation needs of the Danville-Pittsylvania region and address each of the eight planning factors mandated in federal transportation laws and regulations - specifically the requirements of the federal transportation act: *SAFETEA-LU (Safe, Accountable, Flexible Transportation Equity Act—Legacy for Users)*;
- Review of these recommendations with government agencies and the general public; and
- Assess social and environmental impacts of the transportation recommendations.

The transportation improvements in this document are recommended to be constructed by the year 2035. As indicated above, improvements were considered for all modes of travel in the region. In addition, the proposed improvements meet federal planning requirements for fiscal constraint. The fiscal constraint requirements state that the proposed transportation projects could be constructed based on reasonable estimates of federal, state, and local transportation funding streams to the year 2035. Projects that meet these requirements for fiscal constraint are included in the final Financially Constrained Long-Range Transportation Plan. Where funds for proposed improvements have not been identified, projects have been included in the Transportation Vision Plan.

### **I. Recommended Improvements**

Recommendations for improvements to the Danville-Pittsylvania area transportation system were developed based on analysis of existing and projected future deficiencies along with input from representatives of local governing bodies, the Virginia Department of Transportation (VDOT) and the Virginia Department of Rail and Public Transportation (VDRPT). The recommended improvements address all modes of transportation and have been evaluated and prioritized to meet fiscal constraints.

### *I.A Roadway Improvements*

The roadway improvements included in the *Danville-Pittsylvania Area Long-Range Transportation Plan: Year 2035* include projects currently programmed for funding in the *Virginia Transportation Six-Year Improvement Program: Fiscal Years 2011-2016*. These projects are also included in the Danville Metropolitan Planning Organization's Transportation Improvement Program (TIP). Other roadway improvements that are not funded in either the *Six-Year Improvement Program* and/or the TIP are also recommended – all recommended improvements in the Transportation Plan, however, are capable of being funded based on expected funding streams within the 2035 timeframe of the Plan.

The proposed roadway improvements are shown in tabular form in **Exhibit 1** and are depicted on the map included as **Exhibit 2**. Note that projects programmed in the Six-Year Improvement Program are indicated in **Exhibit 1** by a "PP" in the *Status* column. Drawings of the typical sections for roadway improvements are shown in **Exhibit 3**.

Due to constrained financial resources for roadway improvements, sufficient funds are not forecast to be available to fully fund all projects through 2035. Consequently, for some improvements, sufficient funding for completing preliminary engineering (PE) only has been recommended. PE only funding is also indicated in **Exhibit 1** in the *Fund Allocation in LRTP* column. This ensures that such projects are eligible for federal and state funding, while preserving available funding for completing several improvement projects.

Beyond funding individual projects, funding is also provided for categorical improvements (see four items at bottom of **Exhibit 1**). These funds are intended to address specific needs and deficiencies while providing flexibility through annual programming of available funds. This Transportation Plan recommends that the allocation of Safety/ITS Operational Improvements be focused on the following areas:

1. Corridors and intersections identified as High Frequency Crash Corridors;
2. Implementation of the recommendations developed in the *West Main – Memorial Drive and US Route 58 West Access Management Studies*; and,
3. Implementation of the recommendations developed in the *US Route 29 Access Management Plan – Blairs*.

Since the forecasted \$4.5 million in funds for these improvements will be programmed by the MPO in coordination with VDOT and the local jurisdictions, priorities should be established at the time of programming.

Improvements to the roadway network to better accommodate projected year 2035 traffic demands were developed based on consideration of overall regional travel demand patterns, land use patterns, socio-economic and environmental constraints, and the transportation needs identified in the No-Build Alternative network. Initial recommendations were screened through a series of meetings with Danville and Pittsylvania County staff, as well as VDOT. Initial recommendations were also presented at public meetings for review and comment prior to developing a final draft of recommendations. Comments on the final draft of the Transportation Plan were also solicited at both an informal citizens meeting and at a formal public hearing.

## Danville-Pittsylvania Area Long Range Transportation Plan

### Exhibit 1 Table of Recommended Roadway Improvements Year 2035

<u>2035 Map ID (1)</u>	<u>Project Description (From/To)</u>	<u>Locality</u>	<u>Status (2)</u>	<u>Comments</u>	<u>Proposed Typical Section (3)</u>	<u>Estimated Cost (Year of Expenditure)(4)</u>	<u>Previous Allocation (Prior to 2010)</u>	<u>Fund Allocation in LRTP (2010- 2035)</u>
1	Robertson Bridge	City of Danville	PP	Replace Robertson Bridge and Improve Approaches.	U4	\$48,288,000 (2011)	\$46,074,000	\$2,214,000
2	VA 41 Extension -- US 29 Bypass to VA 293	Pittsylvania County	PP	Construct new roadway (Rte 265-Franklin Turnpike Connector	U4D	\$38,172,000 (2011)	\$24,343,000	\$13,829,000
3	Sandy Creek Bridge Replacement (Rt. 730)	Pittsylvania County		Replace Bridge	R2	\$2,040,000 (2020)	\$0	\$2,040,000
4	Mt. Cross (Rt. 750) - City Line to Old Mt. Cross	City of Danville		Widen to 4 Lanes.	U4D	\$22,050,000 (2020)	\$0	\$22,050,000
5	Airport Dr. at Stinson Dr.	City of Danville		Geometric improvements.	U2	\$830,000 (2020)	\$0	\$830,000
6	US 29 Bypass at Elizabeth Street (Rt. 1128) - Ramp and Road Improvements	City of Danville		Improvements to the ultimate interchange ramps as well as improvements on Elizabeth St. and Holland Road.	U2D	\$9,690,000 (2030)	\$0	\$1,000,000 (PE Only)
7	US 29 (Central Boulevard) at VA 413 (Memorial Drive)	City of Danville		Improve alignment of southbound to westbound ramp	U4D	\$1,950,000 (2030)	\$0	\$1,950,000
8	Piney Forest Road (US 29 Bus.) at North Main Street (VA 293)	City of Danville		Upgrade and signalize intersection, modify circulation patterns (including re-alignment of Seminole Drive)	U4D	\$3,550,000 (2030)	\$0	\$3,550,000
9	Piney Forest Road and Central Boulevard at (US 29 Bus.) – Piney Forest Road to Parker Road	City of Danville		Intersection and circulation improvements (includes shift of Piney Forest Road connection to opposite Parker Road).	U4D	\$11,670,000 (2030)	\$0	\$1,000,000 (PE Only)
10	VA 863 -- US 58 to 0.8 miles south of VA 750	Pittsylvania County		Construct roadway on new alignment.	R2	\$33,010,000 (2020)	\$0	\$2,000,000 (PE Only)
11	Oak Ridge Farms Interchange (w/ US 58 Bypass)	Pittsylvania County		Interchange improvements.		\$11,160,000 (2030)	\$0	\$1,000,000 (PE Only)
12	Mega Park Connector Road - Oak Ridge Farms Interchange (w/ US 58 Bypass) to Megapark	Pittsylvania County		Construct 4-lane roadway on new alignment.	R4D	\$26,520,000 (2030)	\$0	\$2,000,000 (PE Only)
13	VA 726 (Kentuck Church) -- Rt. 729 to 0.1 MS VA 360	Pittsylvania County	PP	Reconstruct 2 lane (UPC #954)	R2	\$6,820,509 (2015)	\$4,740,000	\$2,080,509

**Notes:**

- (1) Map ID number matches number of map of location of improvements
- (2) PP – Included in The Virginia Six-Year Transportation Improvement Program: Fiscal Year 2010-2015I PA – Programmed Annually
- (3) Proposed improved roadway cross sections are illustrated in the panel labeled “Typical Roadway Sections.”
- (4) Planning-level cost estimates based on average estimates for typical section or project description. Inflation has been included in estimate computation. Unless otherwise noted, cost estimates include preliminary engineering (PE), right of way acquisition and construction.

# EXHIBIT 2 - DANVILLE - PITTSYLVANIA AREA LONG-RANGE TRANSPORTATION PLAN - YEAR 2035

**Legend**

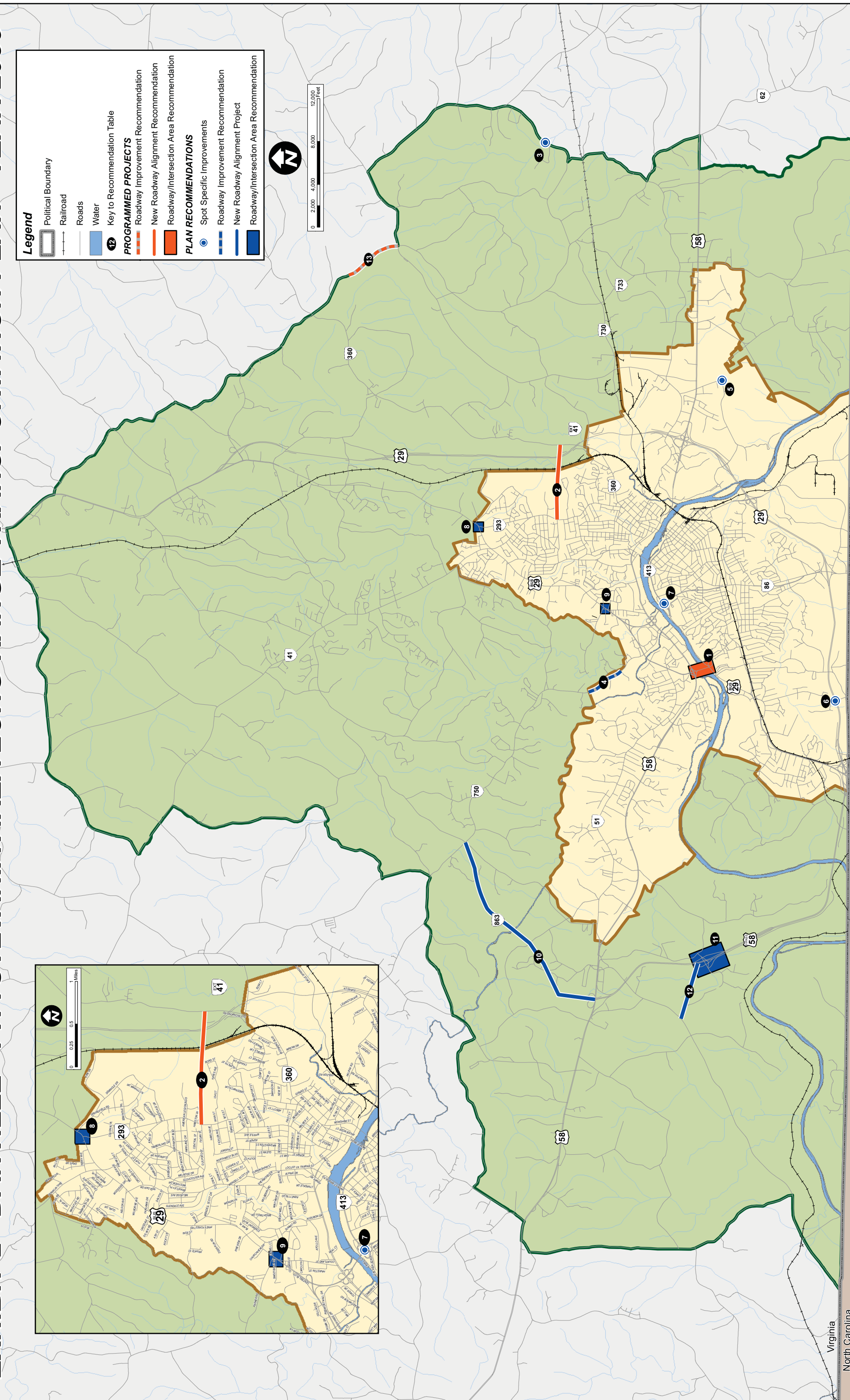
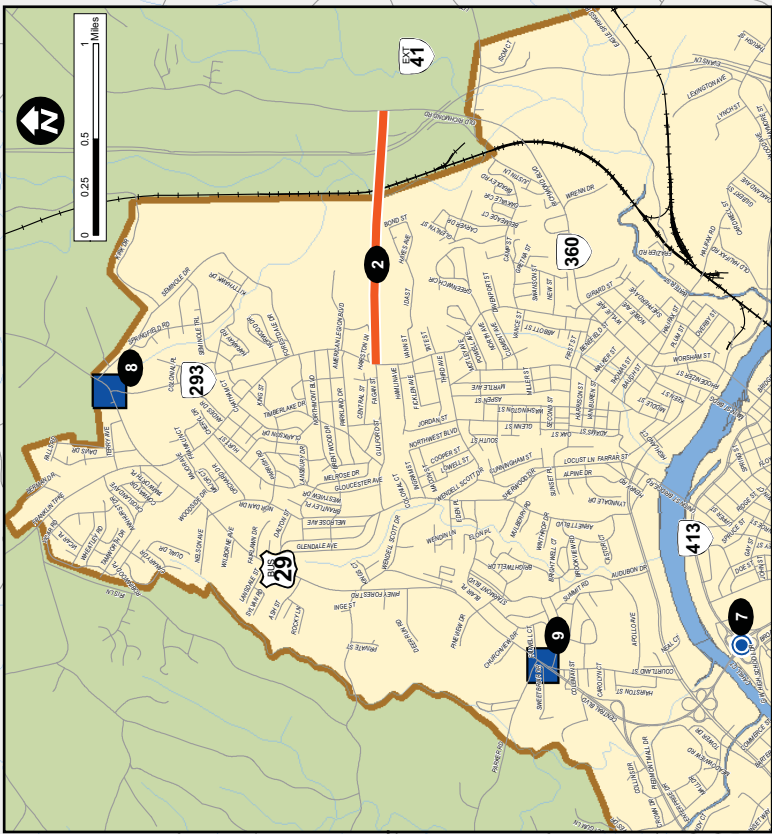
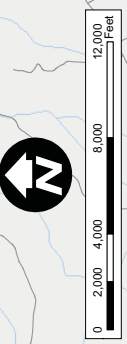
- Political Boundary
- Railroad
- Roads
- Water
- Key to Recommendation Table

**PROGRAMMED PROJECTS**

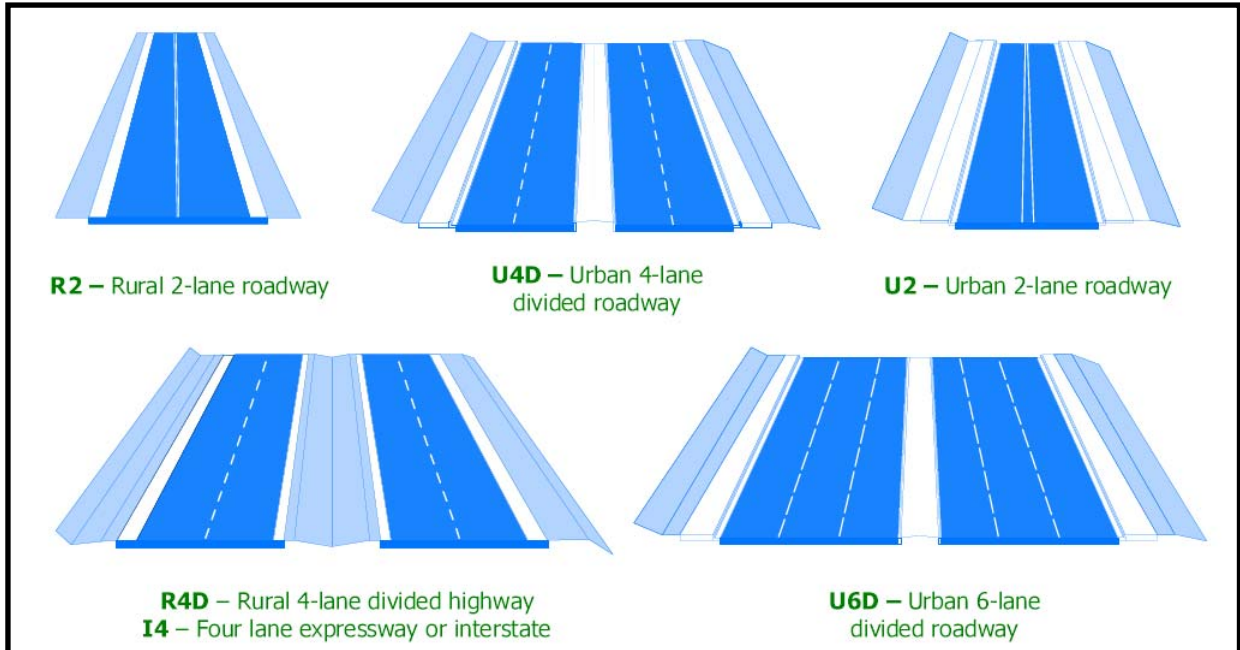
- Roadway Improvement Recommendation
- New Roadway Alignment Recommendation
- Roadway/Intersection Area Recommendation

**PLAN RECOMMENDATIONS**

- Spot Specific Improvements
- Roadway Improvement Recommendation
- New Roadway Alignment Project
- Roadway/Intersection Area Recommendation



**Exhibit 3  
Roadway Typical Sections**



*I.B Public Transportation & Airport Improvements*

Concurrent with development of the *Danville-Pittsylvania Area Long-Range Transportation Plan: Year 2035*, Danville Transit developed the *Transit Development Program: Fiscal Year 2010-2015 (TDP)*. The purpose of the development plan is to identify facility and service needs, to evaluate financial resources and to develop recommended improvements.

**Service Improvements:** The study process identified several service improvements, including:

- All-day fixed route service to the City's east side
- Expansion of Reserve-a-Ride service (2 options were presented)
- Downtown Trolley Circulator
- Restructured route system with more frequent service
- Potential service outside of the city and into unincorporated Pittsylvania County

However, as with roadway funding limitations, the *TDP* concluded that financial constraints are unlikely to support service expansion in the near-future. In both recognition of and response to financial constraints, the *TDP's* defined maintaining existing fixed route, Reserve-a-Ride and Handivan service levels as the highest priority. To this end, it recommended that beginning in 2011 (should funding be available), Reserve-a-Ride service be expanded to include service from 9:00 a.m. to 3:00 p.m. This improvement

addresses the existing service gap, and will expand service to include any trip origin and/or destination that is not located on a fixed route.

Should additional funding become available, service improvements are prioritized as follows:

1. Further expansion of Reserve-a-Ride service, with an extra bus running in the peak periods;
2. All-day fixed route service to the City's Eastside; and
3. Limited evening fixed route service to key transit market destinations within the City until 9:00 p.m.

***Facility Improvements:*** The TDP also identified the following facility improvements:

*FY 2010*

- Two replacement buses
- Maintenance, safety and security improvements
- HUB facility improvements
- Passenger benches and shelters

*FY 2011*

- One replacement bus
- Bus washing system
- Driver locker room at maintenance facility

*FY 2012*

- Three replacement buses
- Bus washing system
- Driver locker room at maintenance facility

*FY 2013*

- Two replacement buses

*FY 2014*

- Two replacement buses

The *TDP* has identified the need for several improvements at the City's transit garage, some improvements at the City's downtown transit center (the HUB) and some passenger amenities at bus stops.

Finally, as part of a transit Vision Plan approach, the *TDP* identified one potential service improvement that warrants further study - a service expansion outside of the city limits and into unincorporated Pittsylvania County. Neither funds nor a schedule have been identified for this study.

Over the past four years and at the request of the Federal Aviation Administration, the Danville Regional Airport has been involved with the development of a Master Plan Update. A focal point of the study identified that Danville's primary runway did not meet current design standards, a condition which could possibly impact safe operations. Therefore, the FAA has requested that the airport correct all related deficiencies through a runway rehabilitation project. Design services are underway to rehabilitate the runway. It is anticipated that if all deficiencies are corrected the total project cost could range between \$7,000,000 and \$10,000,000. During construction access to the field will be limited to aircraft that do not require more than 3,200 feet of pavement. Related improvements will involve correcting the line of sight along 2,400 feet of pavement, reducing the width of the runway from 150' to 100' and correcting the drainage system. Other capital improvement projects that were identified in the study would involve developing areas of the field for

prospective firms or for hangar development; however these improvements would be completed after the runway rehabilitation work has been completed.

*I.C. Other Modes of Travel*

A number of projects to enhance pedestrian travel and safety, and to improve localized access and circulation, were identified as part of the Transportation Plan study process. These projects, included in the Financially Constrained Transportation Plan, are described in **Exhibit 4**. The highest priority improvement is the link proposed between the western terminus of the Ringgold Depot Trail in Pittsylvania County and the Riverwalk Trail in Danville. The specific location for this link will be determined by a location study.

**Exhibit 4  
Recommended Improvements for Other Modes**

Locality	Project Description (From/To)
Pittsylvania County	Study potential connections between US 58 and VA 863/VA 872 west of the City of Danville.
City of Danville	West Main Street between Wooding Avenue and Main Street intersection north of Danville Regional Medical Center: Implement signage, striping, crosswalks, and traffic signals as recommended in September 2003 study.
Pittsylvania County/ City of Danville	Extend Ringgold multi-use trail into the City of Danville.
City of Danville	Construct multi-use trail along Pumpkin Creek.
City of Danville	Perform study of circulation patterns in Downtown Danville With emphasis on multimodal needs along the Riverwalk.

*I.D. Funding Considerations*

The estimated total cost of the roadway improvements in the *Danville-Pittsylvania Area Long-Range Transportation Plan: Year 2035*, including projects programmed in the *Virginia Transportation Six-Year Improvement Program: Fiscal Year 2010-2015*, is \$67.9 million. This amount is substantially lower than the estimated amount used in late 2009 for the Year 2030 Transportation Plan update, and it is approximately one-third the amount estimated when the initial Year 2030 Transportation Plan Update was developed in 2004. In summary, the forecasts of revenue for transportation improvements are:

- Original 2030 Plan (developed in 2004)                      \$188.4 Million
- Updated 2030 Plan (developed in 2009)                      \$95.1 Million
- 2035 Plan (developed in 2010)                                      \$67.9 Million

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The reasons leading to the drop in forecasted revenues for transportation improvements are chiefly products of two dynamics: 1) Growing need for revenues for maintenance of the transportation system; and 2) Reduced revenues resulting from reduced economic activity. Both factors are related to economic and policy issues that cannot be addressed by the two local jurisdictions. The annual forecast of construction funding for the Danville-Pittsylvania area is shown in **Exhibit 5**.

**Exhibit 5  
Annual Forecast of Construction Funding  
Danville-Pittsylvania Urbanized Area**

*(Source:  
VDOT)*

Fiscal Year	Funding Category				TOTAL
	Primary	Secondary	Urban	MPO	
2010	\$2,008,549	\$689,060	\$1,385,416	\$501,123	\$4,584,148
2011	\$2,418,302	\$393,381	\$928,741	\$294,935	\$4,035,359
2012	\$2,208,830	\$326,261	\$0	\$296,876	\$2,831,968
2013	\$1,953,959	\$314,909	\$0	\$298,829	\$2,567,697
2014	\$1,741,104	\$592,613	\$0	\$300,794	\$2,634,512
2015	\$2,031,004	\$472,799	\$0	\$302,772	\$2,806,575
2016	\$0	\$75,658	\$0	\$2,360,956	\$2,436,614
2017	\$0	\$75,658	\$0	\$2,353,155	\$2,428,813
2018	\$0	\$75,658	\$0	\$2,344,418	\$2,420,076
2019	\$0	\$75,658	\$0	\$2,334,702	\$2,410,360
2020	\$0	\$75,658	\$0	\$2,323,967	\$2,399,625
2021	\$0	\$75,658	\$0	\$2,312,166	\$2,387,825
2022	\$0	\$75,658	\$0	\$2,303,266	\$2,378,924
2023	\$0	\$75,658	\$0	\$2,301,105	\$2,376,764
2024	\$0	\$75,658	\$0	\$2,298,104	\$2,373,762
2025	\$0	\$75,658	\$0	\$2,293,656	\$2,369,315
2026	\$0	\$75,658	\$0	\$2,303,777	\$2,379,436
2027	\$0	\$75,658	\$0	\$2,318,071	\$2,393,729
2028	\$0	\$75,658	\$0	\$2,332,453	\$2,408,111
2029	\$0	\$75,658	\$0	\$2,346,923	\$2,422,582
2030	\$0	\$75,658	\$0	\$2,361,483	\$2,437,141
2031	\$0	\$75,658	\$0	\$2,376,132	\$2,451,790
2032	\$0	\$75,658	\$0	\$2,390,870	\$2,466,528
2033	\$0	\$75,658	\$0	\$2,405,701	\$2,481,359
2034	\$0	\$75,658	\$0	\$2,420,621	\$2,496,280
2035	\$0	\$75,658	\$0	\$2,435,633	\$2,511,291
<b>TOTAL</b>	<b>\$12,361,749</b>	<b>\$4,302,193</b>	<b>\$2,314,157</b>	<b>\$48,912,487</b>	<b>\$67,890,586</b>

The exhibit shows that from FY 2010 through FY 2015, the forecasted amounts are allocated to the appropriate roadway system, such as Primary, Urban and Secondary. These allocations are consistent with construction funding allocations as documented in *The Virginia Six-Year Transportation Improvement Program: FY2010-2015*. After 2015, funding has not been allocated to specific projects in a funding program or roadway system. Consequently, the forecasts of funding for transportation improvements is allocated between the Secondary system, for which improvements will be prioritized by VDOT, and other transportation needs, for which improvements will be prioritized by the MPO.

### **II. Transportation Plan Development**

The process used to develop the *Danville-Pittsylvania Area Long-Range Transportation Plan: Year 2035* included the identification of multi-modal transportation needs, development and assessment of potential transportation improvements, and estimates of the funding sources and expenditures necessary for implementing the recommended improvements by the horizon year of 2035. The boundaries of the study area encompass those areas defined as urbanized by the United States Census. The study area also extends to ensure that areas that have the potential (based on discussions between state and local officials) to become urbanized by the year 2035 have been included. The general boundaries of the study area are the North Carolina line to the south, VA 718 to the north, VA 862 to the west, and VA 728 to the east. This Transportation Plan represents the latest phase of a continuing transportation planning process that began with the Federal Highway Act of 1962. The process for developing the Plan is also required by federal under which and in accordance with which this plan was developed - SAFETEA-LU (the Safe, Accountable, Flexible Transportation Equity Act—Legacy for Users)

*“It is in the national interest to... encourage and promote the safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight and foster economic growth and development within and between States and urbanized areas, while minimizing transportation-related fuel consumption and air pollution....”*

*“To accomplish the objectives [stated above], metropolitan planning organizations [MPOs]...in cooperation with the State and public transportation operators, shall develop long-range transportation plans...”<sup>1</sup>*

### **III. Planning Process**

The *Danville-Pittsylvania Area Long-Range Transportation Plan: Year 2035* was developed through logical sequence of analytical steps producing a set of recommendations that respond to identified needs with the limited available capital investment. A database consisting of traffic counts, crash records, travel characteristics, and land use information was developed to assess existing travel demands. This information was obtained from various sources, including field observations and traffic counts.

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<sup>1</sup> Title 23, United States Code, Sec. 134 (a) & (c).

Intersection turning movement traffic count data was collected between September 28, 2009 and October 1, 2009. The development of the travel demand model was conducted by VDOT. Forecasts of year 2035 demographic data were developed by City and County staff and provided to VDOT for development of the year 2035 traffic forecasts.

The operation of the roadway system was analyzed using traditional traffic engineering capacity (level of service) analysis. This analysis grades the operation of roadway for both existing and future years using a scale from A to F. The definition of service levels are summarized in **Exhibit 6**.

**Exhibit 6**  
**Definition of Level of Service**

<b>Level of Service (LOS)</b>	<b>Description</b>
A	Free flow
B	Reasonably free flow
C	Stable flow
D	Approaching unstable flow
E	Unstable flow
F	Forced or breakdown flow

Source: National Research Board, Highway Capacity Manual

In conformance with standard VDOT practice for areas such as this, levels of service E and F were considered as indicating deficient conditions. Roadways and intersections that currently operate or are forecasted to operate at levels of service E or F were considered for improvements. The operations of other modes of travel, including transit, pedestrian, bicycle, rail, and air, were analyzed based on coordination with appropriate public agencies, comparisons with other areas, and observation.

The regional travel demand model was updated by VDOT for this Transportation Plan. The transportation model provides forecasts of the traffic volumes that are expected to result from changes in land use patterns between now and the year 2035. Future traffic forecasts were used both to perform capacity analysis to identify potential roadway deficiencies and to develop growth factors to apply to intersection turning movement counts. These forecasted turning movement volumes were then used to conduct capacity analysis.

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The City of Danville and Pittsylvania County initiated pursuit of the Mega Park, a 3,000-3,500 acre industrial, warehouse and economic development center located in Pittsylvania County on Berry Hill Road (Route 863) south of U.S. Route 58 and west of the Danville Expressway. Working jointly through the Danville-Pittsylvania Regional Industrial Facility Authority, the jurisdictions have engaged an engineer to conduct studies for establishing public utilities and transportation service to the site. The impact of the Mega Park had not been considered in the development of the initial year 2035 demographic forecasts.

The impact of the Mega Park had not been included in the initial development of regional year 2035 demographic forecasts. To address the impact of development of the Mega Park, four modifications to the initial 2035 socioeconomic forecasts were developed:

1. Estimation of the number of added employees to the Danville-Pittsylvania urbanized area resulting from development of the Mega Park;
2. Estimation of the number of Mega Park employees who will reside within the boundaries of the urbanized area;
3. Estimation of the commuter patterns approaching the Mega Park that will likely be used by commuters who reside outside the urbanized area; and,
4. Estimation of the 2035 socioeconomic forecasts to be added to the initial 2035 urbanized area forecasts. The additions are caused by the added number of employees at the Mega Park who also reside within the urbanized area boundaries.

After reviewing forecasts of development in the Mega Park and coordinating with both VDOT and the Virginia Employment Commission, revised forecasts for the year 2035 were developed. A comparison of the total number of each socioeconomic variable is as follows:

<b><u>Scenario</u></b>	<b><u>Employment</u></b>	<b><u>Households</u></b>	<b><u>Autos</u></b>	<b><u>Population</u></b>
Initial 2035	34,493	32,611	52,462	70,345
Mega Park	5,750	1,385	2,170	2,976
Revised 2035	40,243	33,996	54,632	73,321

The improvement recommendations in the *Danville-Pittsylvania Area Long-Range Transportation Plan: Year 2035* have been subjected to a review of the potential for environmental effects. This overview included the following: potential residential and business displacements;

- environmental justice group (low-income and minority) impacts;
- community disruptions;
- community service impacts;
- land use/zoning conflicts;
- hazardous materials sites;
- impacts on historic sites and districts;
- impacts to wildlife refuges, critical habitats, and known locations of threatened and endangered species;
- proximity to wild and scenic rivers;

- encroachment on critical soil types (prime farmlands, erosive soils);
- proximity to managed forest lands, scenic routes, and parks/recreation areas;
- air quality impacts; impacts to noise sensitive receptors; and
- impacts to water quality, floodplains, and wetlands.

Detailed environmental analysis of individual transportation projects occurs later in the project development process as the improvement approaches the preliminary engineering stage. At this stage, project features may be narrowed and refined, and the environmental impacts and environmental mitigation strategies can be appropriately ascertained. Virginia's State Environmental Review Process directs the project-by-project interagency review, study and identification of environmental concerns. Related requirements that typically apply at this stage involve public hearings, environmental permit-processing, and NEPA studies. Usually, a variety of environmental documentation, permit and mitigation needs are identified and environmental findings are closely considered and evaluated.

#### **IV. Planning Factors**

To ensure compliance with the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the federal legislation governing transportation planning, and with the rules promulgated to implement SAFETEA-LU, the 2035 Transportation Plan was developed to address key planning factors. These factors are intended to ensure that transportation plans are developed to consider all transportation modes, the environmental and social impacts of transportation projects, and better plan for the future through such actions as early preservation of transportation rights of way. These factors must be considered as part of the planning process for all metropolitan planning areas.

*Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.*

The Plan places special emphasis on ensuring multi-modal access major industrial areas, such as Cane Creek Centre and the Mega Park. The efficiency of freight movement can be enhanced through highway improvement projects, such as widening certain roadways, constructing roadway connections to major arterials, and improving access to existing rail and truck facilities. The following projects, actions and policies are all recommended in the transportation plan, in part, to enhance the efficient movement of freight.

#### **Major Projects:**

- Improved access to the Route 29 Bypass from major activity corridors in the region, such as the Route 41 Extension which extends from Piney Forest Road and North Main Streets to the Route 29 Bypass. Improved access to existing and planned industrial areas along Route 730 west of the Route 29 Bypass will be provided by the proposed Route 41 Extension from the Route 29/Route 360 interchange and Route 730.
- Access management on Route 58 East to ensure the continued function of this roadway as a major regional connector.

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- Improved regional access into major activity centers such as the Mega Park.
- Widening of Robertson Bridge and associated improvements.
- Widening Mount Cross Road.

### **Other Actions and Policies:**

- Improve transportation flow and efficiency by concentrating on the movement of people and goods to support mobility and the economic viability of Danville and Pittsylvania County.
- Promote air and rail freight service in the Danville-Pittsylvania area.

### *Increase the safety of the transportation system for motorized and non-motorized users:*

The Plan allocates substantial funding for corridor and intersection safety improvements along Piney Forest Road, at the Elizabeth Street interchange with the Danville Expressway and along Route 58, and promotes policies for ensuring transit access to employment and retail centers.

In contrast with the findings in the roadway crash analysis, no existing safety problems have been identified in the transit system. Recommendations to address potential safety issues and encourage additional use of the transportation system are part of this Transportation Plan. These include:

### **Major Projects:**

- Improvements at the Danville Expressway interchange with Elizabeth Street
- Ramp alignment improvements at the Central Boulevard (US 29) interchange with Memorial Drive
- Intersection improvements at Piney Forest Road and North Main Street
- Intersection improvements at Piney Forest Road from Central Boulevard to Parker Road
- Implementation of Access Management Study's recommendations

### **Other Actions and Policies:**

- Construction of lighted bus shelters at major stops.
- Improved transit transfer hubs in downtown and elsewhere.

### *Increase the security of the transportation system for motorized and non-motorized users:*

The Plan provides redundancy for travel routes, avoiding vulnerable bottlenecks for which no alternative routes are available.

### **Major Projects:**

- Widen and Replace the Robertson Bridge;
- Improvements at the Danville Expressway interchange with Elizabeth Street
- Ramp alignment improvements at the Central Boulevard (US 29) interchange with

Memorial Drive

- Implementation of Access Management Study's recommendations

**Other Actions and Policies:**

- Improve high frequency crash corridors

*Increase accessibility and mobility of people and freight:*

The Plan focuses on addressing existing safety and capacity deficiencies, and provides for more direct routes to employment centers. It also identifies transit service enhancements and improvements.

**Major Projects:**

- Improved access to the Route 29 Bypass from major activity corridors in the region, such as the Route 41 Extension which extends from Piney Forest Road and North Main Streets to the Route 29 Bypass.
- Improved access to existing and planned industrial areas along Route 730 west of the Route 29 Bypass will be provided upon completion of the Route 41 Extension from the Route 29/Route 360 interchange.
- Improved access to the planned Mega Park economic development area.
- Access management on Route 58 and West East to ensure the continued function of this roadway as a major regional connector.
- Improved regional access into major retail commercial areas in the Piedmont Drive area on such proposed improvements on Piney Forest Road and Mount Cross Road.
- Widening of Robertson Bridge and associated improvements.

**Other Actions and Policies:**

- Improve transportation flow and efficiency by concentrating on the movement of people and goods to support mobility and the economic viability of Danville and Pittsylvania County.
- The Transportation Plan supports improved access via automobile and transit to the planned major employment centers near the Danville Airport and the industrial areas north of Route 58 East and south of Route 58 West.
- Modification of local subdivision and site plan ordinances to provide for transit service stops at major destinations.

*Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.*

The Plan provides a multi-modal approach to address potential service to economic development opportunities, and is consistent with State plans for roadways, transit and

trails. Finally, major improvements have been located away from environmentally sensitive areas.

A systems level overview of the social, economic, energy and environmental affects of the alternative improvement packages was conducted as part of the development of this *Long-Range Transportation Plan*. The benefits anticipated by the implementation of some of these recommended projects are listed below.

**Major Projects:**

- Construction of improvements to Mount Cross Road will reduce congestion entering the retail commercial area along Piedmont Drive, resulting in improved safety, traffic flow, and air quality.
- Widening of Robertson Bridge and associated improvements will enhance freight delivery service to the Piedmont mall area.
- Franklin Turnpike (VA 41) Improvements will support planned residential growth northwest of the city.
- Implementation of access management recommendations along U.S. Route 58 East and West will result in improved safety, traffic flow, and air quality.

**Other Actions and Policies:**

- All projects recommended in this transportation plan were assessed for their environmental, socioeconomic, and energy impacts.
- Improve transportation flow and efficiency by concentrating on the movement of people and goods to support mobility and the economic viability of Danville and Pittsylvania County.
- Encourage consolidation of driveway access points and tighter controls on access.
- Promote high density growth in areas (Downtown, Piedmont Mall, and Piney Forest) served by transit.
- Support transit service for transportation-disadvantaged.
- Provide focused transit service to major destinations.
- Identify and support transit-dependent communities.
- Maintain existing focus on transportation maintenance.
- Continually identify and upgrade unsafe intersections and roadways (via semi-annual corridor and intersection studies).
- Promote air and rail freight service in the Danville-Pittsylvania area.
- Promote ridesharing by involving employers and employees in improving transportation.

The Transportation Plan recommendations are the result of the analysis of the impacts of existing and projected economic, demographic, and land use activities, and projections of potential transportation demands based on the interrelated level of activity in these areas. Several traffic model runs were performed to evaluate the effects of the package of recommended improvements on projected transportation demands. An environmental

overview, identifying the environmental, household, commercial, social, and land use impacts related to each major project, was also performed.

The following recommended construction projects would be controlled access facilities or would convert existing facilities to controlled access facilities. By concentrating access points at particular locations, strip development is disallowed, and more concentrated growth is promoted.

- Widening of Robertson Bridge and associated improvements
- US 29 Interchange at Elizabeth Street

The proposed access management on Route 58, both east and west of Danville, will also have direct positive impacts on land use and development in these important corridors. The following actions and policies, included in this transportation plan, were developed, in part, to consider the effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provisions of all applicable short- and long-term land use and development plans:

- Improve transportation flow and efficiency by concentrating on the movement of people and goods to support mobility and the economic viability of Danville and Pittsylvania County.
- Promote high density growth in areas (Downtown, Piedmont Mall, and Piney Forest) served by transit.
- Ongoing focus on maintaining and improving the geometry and signage on radial roadways into and out of the city.

Many projects and policies recommended in the Transportation Plan will help to reduce congestion on arterial roadways, thereby improving traffic flow and reducing energy consumption, and encourage the use of other more energy-efficient modes of travel. These recommendations are consistent with state and local goals and objectives relative to energy consumption. The following actions and policies were developed in part to meet energy conservation goals:

- Reduce spot congestion through ongoing intersection and corridor studies.
- Promote high density growth in areas (Downtown, Piedmont Mall, and Piney Forest) served by transit.
- Assess cost-effectiveness of fixed-route service to lower density areas as compared to demand responsive or taxi service.
- Continually identify and upgrade unsafe intersections and roadways.
- Promote intercity train and bus service.
- Encourage preferential parking for carpools in conjunction with public awareness program.
- Encourage employers to use staggered work hours to relieve spot congestion at plant entrances.
- Promote ridesharing by involving employers and employees in improving transportation.

## ***Danville-Pittsylvania Area Long Range Transportation Plan***

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- Support access by bicycle to major recreation areas and other activity centers. Expand the successful Riverwalk Trail system and connect it to the Ringgold Depot Trail.

*Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.*

The Plan provides for enhanced intermodal access by improving capacity, geometry and safety on major inter-city routes and to existing and planned employment centers. It also provides for access improvements at the airport and enhanced transit accessibility to industrial areas.

### **Major Projects:**

- Access management on Route 58 East and West,
- Widening of Mount Cross Road
- Access management improvements on US Route 29 - Blairs

### **Other Actions and Policies:**

- Improve transportation flow and efficiency by concentrating on the movement of people and goods to support mobility and the economic viability of Danville and Pittsylvania County.
- Ongoing focus on maintaining and improving the geometry and signage on radial roadways into and out of the city.

There are no ports, national parks, national monuments, or military installations in the Danville-Pittsylvania area. Transportation projects, policies and other actions recommended in this Transportation Plan will improve major freight distribution routes and access to intermodal facilities, the airport, and recreation areas.

*Promote efficient system management and operation.*

The Plan emphasizes development of transportation system management approaches to addressing deficiencies. Transportation needs that were identified in the development of the management systems (the Pavement, Bridge, Highway Safety, Traffic Congestion, Public Transportation Facilities and Equipment, and Intermodal Facilities and Systems management systems) were addressed in the development of the following recommended projects, policies and actions.

### **Major Projects:**

- Widening of Robertson Bridge and associated improvements
- Geometric improvements at the following locations:
  - Airport Drive and Stinson Drive

- Central Boulevard and Memorial Drive
- Piney Forest road and North Main Street
- Piney Forest Road (Central Boulevard to Parker Road)
- Route 726 (Kentuck Church Road)

***Other Actions and Policies:***

- Reduce spot congestion through ongoing intersection and corridor studies.
- Keep existing focus on transportation maintenance.
- Utilize transportation modeling software as storage basis for traffic data, both existing and historical; make increasing use of geographic information systems.
- Develop and maintain a list of critical intersections and corridors for congestion analysis.
- Incorporate management systems into transportation decision-making process when developing the transportation improvement program (TIP).

Relieving congestion and preventing future congestion is a primary goal of the Transportation Plan. Many of the recommendations and policies listed above will assist in the achievement of this goal.

*Emphasize the preservation of the existing transportation system.*

Many of the Transportation Plan recommendations relate to upgrading existing facilities to meet current safety, drainage, pavement, and bridge structure standards. The Plan includes substantial investment in existing facilities, including transit, airport and roadway improvements. It emphasizes improvements at existing alignments, interchanges and intersections, and it provides for bridge replacements and pavement section upgrades.

Other actions that will preserve and extend the life of the transportation system include access management through corridor studies and land use decisions made in concert with transportation concerns (such as overlay zoning in major transportation corridors).

## **V. Public Involvement and Plan Adoption**

The citizen participation program followed the process and procedures of the *Public Involvement Participation Plan and Notification Procedures Manual*. Three informal Citizen Information meetings were held on July 22, 2009, March 30, 2010 and June 2, 2010. The first meeting focused on identifying issues and concerns, the second meeting presented improvement alternatives, and the third meeting presented the recommended alternative. All meetings were held at the Danville Regional Airport.

Notices of the meetings were published in the local newspaper, and posted on the MPO website. In addition, notice was posted on the City's public access cable channel. Direct

notices were sent to targeted mailing lists of interested individuals and organizations. For example, individuals who had attended previous corridor study meetings received letters notifying them of the meetings. In addition, articles were published in the local newspaper describing the planning process, and detailing the purpose, location and schedule of the meetings.

Continuous coordination was provided through regular meetings of the Danville-Pittsylvania Metropolitan Planning Organization's (MPO) project management team. This team was established at the initiation of the process and included representatives of the City of Danville, Pittsylvania County, the West Piedmont Planning District Commission, the Virginia Department of Transportation, the Virginia Department of Rail and Public Transportation and the Federal Highway Administration.

In addition, presentations of the recommended plan were provided the Danville City Council on June 1, 2010 and to the Pittsylvania County Board of Supervisors on June 7, 2010.

A formal public hearing was held on June 22, 2010. Its purpose was to provide the public with the opportunity to comment prior to the adoption by the Metropolitan Planning Organization. Following review and consideration of the comments provided both at the citizen information meetings and at the public hearing, responses to comments were presented at the meeting of the Metropolitan Planning Organization held on August 16, 2010. The responses to citizen comments have been included in Appendix B.

The *Danville-Pittsylvania Area Long-Range Transportation Plan: Year 2035* was adopted by the Danville Metropolitan Planning Organization on August 16, 2010.

#### **IV. Transportation Vision Plan**

The total estimated costs for the transportation improvement projects that were identified as part of the transportation plan development process exceeded the estimated funding to the year 2035. As a result, the MPO project management team prioritized the proposed projects in order to identify projects proposed for inclusion in the Financially Constrained Transportation Plan. Those projects with a lesser priority that could not be funded based on the expected funding stream are proposed for inclusion in the region's Transportation Vision Plan. These projects could be advanced should additional funding become available, and will be considered for inclusion the Financially Constrained Transportation Plan as part of the next plan update. In addition, the Vision Plan includes completion of all of the projects that are funded for Preliminary Engineering (PE) only in the financially constrained Long-Range Transportation Plan (See **Exhibit 7**).

## Danville-Pittsylvania Area Long Range Transportation Plan

### Exhibit 7 Danville-Pittsylvania Roadway Vision Plan

Map ID (1)	Project Description (From/To)	Estimated Cost (2)	Locality	Remarks	Proposed Typical Section (3)
1	Piney Forest Road (US 29 Bus.) -- Audubon Drive to Beaver Mill Road	\$20,700,000	City of Danville	Intersection and circulation improvements (includes shift of Beaver Mill Road/Wendell Scott intersection; connect Pineview Drive and Deer Run Road to Beaver Mill Road)	
2	VA 41 Extension -- VA 730 (0.4 miles west of VA 729) to VA 360/US 29 Bypass	\$29,600,000	Pittsylvania County	Construct roadway on new alignment	U2
3	S. Boston Rd. (US 58) - Rt. 29 Exp. To City Line	\$7,500,000	City of Danville	Safety & Access Management	
4	S. Boston Rd. (US 58) - City Line To Ringold Depot Rd. (Rt. 726)	\$5,800,000	Pittsylvania County	Safety & Access Management	
5	Airport Dr. at Stinson Dr.	\$1,500,000	City of Danville	Geometric improvements.	U2
6	US 29 Bypass at Elizabeth Street (Rt. 1128) - Ramp and Road Improvements	\$13,000,000	City of Danville	Improvements to the ultimate interchange ramps as well as improvements on Elizabeth St. and Holland Road.	U2D
7	US 29 Bypass at Elizabeth Street (Rt. 1128) - Bridge Construction	\$10,500,000	City of Danville	Bridge Construction across Rt. 29 and bridge approaches.	U3 (center left turn lanes)
8	Piney Forrest Parkway (US 29 Bus.) -- Mt. Cross Rd. to US 29 Bus.	\$156,000,000	Pittsylvania County/City of Danville	Construct 4-lane parkway on new alignment	R4D
9	Piney Forest Road and Central Boulevard at (US 29 Bus.) -- Piney Forest Road to Parker Road	\$13,400,000	City of Danville	Intersection and circulation improvements (includes shift of Piney Forest Road connection to opposite Parker Road).	
10	VA 863 -- US 58 to 0.8 miles south of VA 750	\$59,600,000	Pittsylvania County	Construct roadway on new alignment.	R2
11	Oak Ridge Farms Interchange (w/ US 58 Bypass)	\$15,000,000	Pittsylvania County	Interchange improvements.	
12	Mega Park Connector Road - Oak Ridge Farms Interchange (w/ US 58 Bypass) to Berry Hill Road (VA 863)	\$35,600,000	Pittsylvania County	Construct 4-lane roadway on new alignment.	R4D
13	VA 750 (Mount Cross Parkway) -- VA 863 to US 29 Business (Piney Forest Road)	\$150,000,000	Pittsylvania County/City of Danville	Construct 2-lane parkway on new alignment (in 4-lane ROW)	R2
14	VA 863 -- VA 41 to US 29	\$32,000,000	Pittsylvania County	Improve two-lane facility	R2
15	VA 360 -- Danville corporate limits to VA 41 Extension	\$17,500,000	Pittsylvania County	Widen to four lanes	U4D
16	VA 730 and 733 -- VA 41 Extension to 0.1 miles south of railroad tracks on VA 733	\$28,700,000	Pittsylvania County	Reconstruct to current two-lane standards, includes improvements to intersection at VA 730/VA 733	U2
17	Reconstruct interchange of 29 Bus. and 58 Bus.	\$87,500,000	City of Danville		
18	US 58 Widening - from 29 Bypass to Rt. 729	\$29,800,000	City of Danville	Widen to 6-lanes.	U6D
19	Riverside Drive (US 58 Bus.) Piedmont Dr. to Westover Dr.	\$13,300,000	City of Danville	Safety & Access Management	

**Notes:**

- (1) Map ID number matches number on Transportation Vision Plan Map
- (2) Planning-level cost estimates based on average estimates for typical section or project description. Inflation has been included in estimate computation and is based on expenditure in the Year 2040.
- (3) Cross section types are illustrated in the panel "Typical Roadway Section."

## Danville-Pittsylvania Area Long Range Transportation Plan

### Exhibit 7 (continued) Danville-Pittsylvania Roadway Vision Plan

Map ID (1)	Project Description (From/To)	Estimated Cost (2)	Locality	Remarks	Proposed Typical Section (3)
20	VA 41 -- VA 719 west to VA 863	41,500,000	Pittsylvania County	Widen from 2 to 5 lanes	U4D
21	VA 360 -- VA 41 Extension to study area boundary	\$57,000,000	Pittsylvania County	Improve two-lane facility	R2
22	VA 726 -- US 58 to Rt. 655	\$13,000,000		Improve 2-lane facility.	R2
23	VA 729 (Kentuck Road) -- US 58 to VA 730	\$30,900,000	City of Danville	Widen to four lanes	R4D
24	VA 750 -- VA 863 to VA 883 (study area boundary)	\$18,600,000	Pittsylvania County	Widen to four lanes	R4D
25	VA 863 -- Study area boundary (North Carolina line) to US 58	\$76,000,000	Pittsylvania County	Improve two-lane facility	R2
26	Elizabeth Street/Edgewood Drive - US 29 to US 29 Business	\$15,000,000	City of Danville	Improve two-lane facility	U2
27	VA 863 -- 0.5 miles south of VA 719 to VA 41	\$15,600,000	Pittsylvania County	Construct roadway on new alignment	R2
28	VA 863 -- 0.8 miles south of VA 750 to 0.5 miles south of VA 719	\$38,000,000	Pittsylvania County	Improve two-lane facility	R2
29	VA 726 (Kentuck Church Rd) -- .7 mi. north of VA 729 to intersection of VA 360.	\$24,400,000	Pittsylvania County	Improve two-lane facility	R2

[1] Estimated costs are planning-level estimates based on average or typical projects for each cross-section type. Costs are for year 2040 YOY (year of expenditure) and include both construction and rights-of-way if not noted otherwise.

**Notes:**

(4) Map ID number matches number on Transportation Vision Plan Map

(5) Planning-level cost estimates based on average estimates for typical section or project description. Inflation has been included in estimate computation and is based on expenditure in the Year 2040.

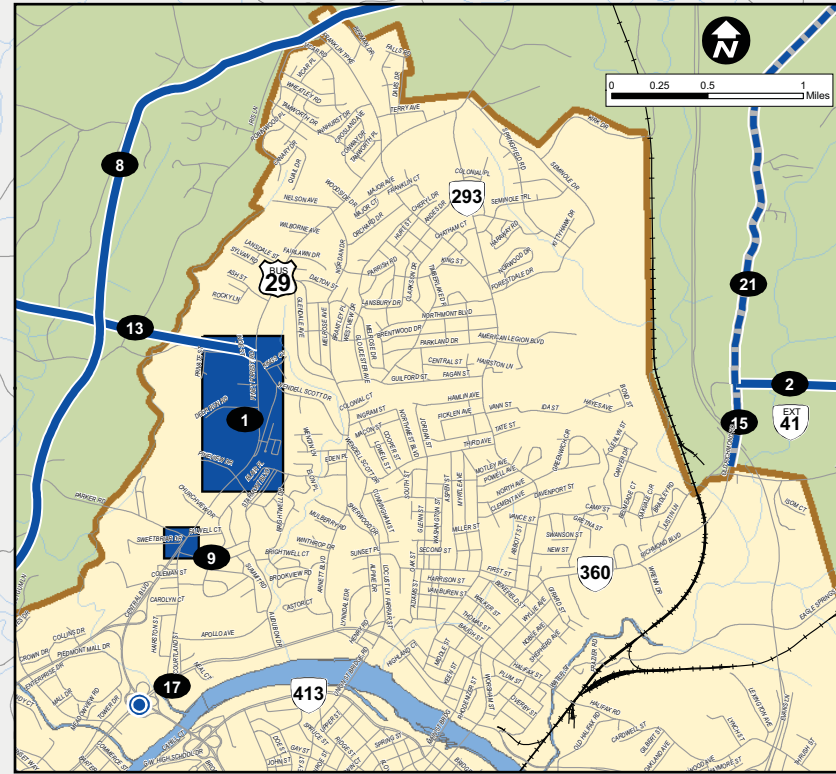
### VII. Additional Documentation

This Executive Summary is one of three documents that have been prepared as part of the development of the *Danville-Pittsylvania Area Long-Range Transportation Plan: Year 2035*. The other two documents are:

*Danville-Pittsylvania Area Long-Range Transportation Plan: Year 2035: A poster-sized map that describes the specific improvements recommended for implementation, along with some of the considerations that were taken into account in developing improvement recommendations.*

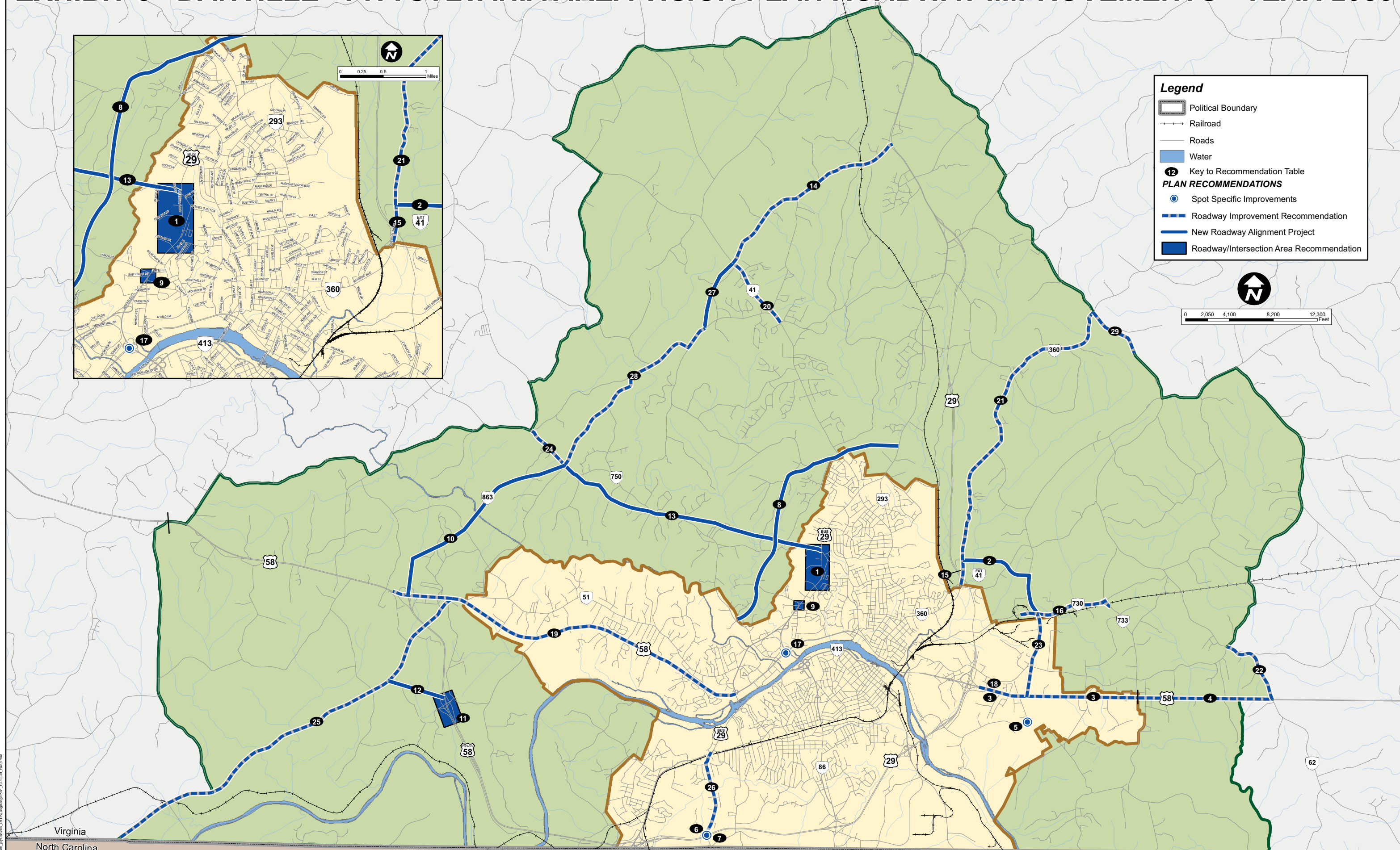
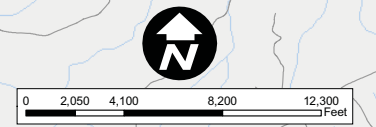
*Danville-Pittsylvania Area Long-Range Transportation Plan: Year 2035 Technical Report: This document provides technical background on the study approach and analysis methods, findings, and recommendations.*

# EXHIBIT 8 - DANVILLE - PITTSYLVANIA AREA VISION PLAN ROADWAY IMPROVEMENTS - YEAR 2035



**Legend**

- Political Boundary
- Railroad
- Roads
- Water
- Key to Recommendation Table
- PLAN RECOMMENDATIONS**
- Spot Specific Improvements
- Roadway Improvement Recommendation
- New Roadway Alignment Project
- Roadway/Intersection Area Recommendation



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Virginia  
North Carolina