

**Draft for Comment**

**Developing a Regional  
Long-Range Plan for  
Transportation**

**Phase II Guidebook**



**Transportation and  
Mobility Planning**

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## Purpose

Starting in July of 2006, VDOT is instituting a new initiative for the Rural Transportation Planning Program. This new initiative is aimed at creating regional transportation plans in rural areas that compliment those in the metropolitan areas of the state. By partnering with Virginia's Planning District Commissions and the local governments each represents, VDOT will be able to work with each region to evaluate the transportation system in the rural areas and to recommend a range of transportation improvements that could best satisfy existing and future transportation needs. The regional plan will identify needs based upon the Goals and Objectives established by the region. Improving the transportation system remains vital to improving the quality of life and continued economic growth and prosperity in Virginia. The provision for the effective, safe and efficient movement of people and goods is a basic goal of all transportation programs in the Commonwealth of Virginia. These regional plans will be developed with this basic goal in mind, as well as incorporating further consideration of environmental issues and local desires.

The Virginia Department of Transportation will use these regional plans as a foundation for identifying Interstate and Primary system priorities for the Six-Year Improvement Program. The plans will also be useful to counties and their respective Residency Administrator when developing the Secondary Six-Year Program. While this plan will cover functionally classified secondary roadways, it is important to note that each county has final authority over the recommendations on the secondary system within their jurisdiction. The list of recommendations from the regional long range plans will also be used in the statewide transportation planning process to better quantify the statewide magnitude of needs. The analysis and plan recommendations are limited to those transportation facilities within the PDC's boundaries that are outside of established metropolitan study areas. The transportation system to be evaluated will be limited to federal functional classified routes of minor collector and above. The development of the transportation plan will be broken into four general phases. These phases are:

- Phase I           Goals and Data Collection
- Phase II          Analysis and Problem Identification
- Phase III         Public Outreach and Recommendation Development
- Phase IV         Public Endorsement and Regional Adoption

The development and components of each RLRP will be modeled after the federally mandated metropolitan transportation planning process (continuing, comprehensive, and cooperative). The transportation plans will have a minimum planning horizon of 20 years and will address the expected impacts of population and employment growth on the transportation system. Each RLRP will be developed as a vision plan and will be reviewed every five years. It is VDOT's goal that each region will be able to use these plans to identify regional priorities for transportation funding. VDOT is fully committed to the RLRP effort and will work with PDC staff and local representatives to provide needed technical assistance and guidance throughout the plans development.

## Tasks and Deliverables – Phase II

### Tasks

1. Complete all unfinished tasks from Phase I
2. Identifying current and future demand
a. Roadway Demand
i. Provide each PDC with Phase II SPS database containing updated inventory (provided by each PDC from Phase I), traffic forecasts and performance measures.
ii. Review current year traffic and horizon year forecasts located in the SPS database provided for Phase II
iii. Analyze traffic forecasts with identified regional high growth areas (Phase I) to determine if adjustments to forecasts are warranted
iv. Analyze water/sewer extension plans (Phase I) to identify corridors that may see increased development/traffic growth – work with VDOT project manager to adjust forecasts accordingly
<b>Note: justifications for any adjustments to traffic forecasts should be documented in the comments field provided in the SPS database for Phase II.</b>
b. Transit Demand – Bus/Para-transit services
i. Overlay map of existing regional and local transit services (Phase I) to map outlining concentrations of elderly and low-income populations (Phase I) and identify areas to expand services.
ii. Interview local/regional transit providers to compile any existing transit expansion plans and/or solicit input on where transit services or expansion of services are needed.
3. Review performance measures
a. Capacity and Mobility
i. Review link level performance measures in SPS (LOS, V/C, etc.)
ii. Identify corridors and intersections that warrant more in-depth analysis – Limited to 20 detailed count locations per region
iii. Conduct detailed capacity/operational analysis of identified locations
iv. Review results of detailed analysis
b. Safety
i. Review safety and crash layers provided by VDOT and identify 20 locations to conduct a road safety audit
ii. Conduct safety analysis and road safety audits and develop draft countermeasures/recommendations to address problems identified.
iii. Review results of safety audits
4. Identify current and future year deficiencies
a. Capacity and Mobility
i. Based on performance measures finalized in Task 3, formally identify deficient corridors and intersections
b. Safety
i. Based on results of roadway safety audits, identify corridors and spot locations in need of safety improvements
c. Transit Services

i. Based on results of mapping analysis and interviews in Task 2b, identify corridors and areas in need of expanded transit services.
d. Public Involvement - Conduct public outreach to modify/verify current and future year deficiencies.
<b>FY-08 Deliverables</b>
<b>Phase II Report</b> containing the following elements
SPS Phase II database containing 1) corrections/modifications to traffic forecasts (with justifications) and 2) corridors flagged as having a capacity and/or safety deficiency
List of deficient intersections (based on review of detailed analysis performed by consultant and input from Residency Administrators)
Map(s) showing corridors at-risk for significant development/traffic growth
Summaries of interviews with local/regional transit providers and existing transit expansion plans
Overlay map of existing regional and local transit services and concentrations of elderly and low-income populations with corridors/areas to consider expanding transit services.

## Completion of Phase I

Please ensure that any incomplete tasks from Phase I are completed. As this is a multi-phased initiative, many tasks build upon previous analysis. For example, in Phase II, each PDC will be overlaying corridor traffic forecasts with maps of high growth areas (developed in Phase I) to identify any adjustments that should be made based on expected development/land use. Another example is the task to overlay maps of disadvantaged groups with maps of current transit service for use in identifying service gaps. It is critical that any uncompleted tasks from Phase I be completed as soon as possible. Upon completion these tasks please be sure to submit the deliverables to your VDOT Project Manager.

## Identifying current and future demand

### ***Roadway Demand***

#### **SPS-Lite Version II**

Each PDC will be provided with an updated version of the SPS-Lite database containing the most recent roadway inventory, updated traffic data and forecasts, and performance measures. This database will be provided prior to the Rural Workshop in November. At the workshop, VDOT will provide an overview/demo of the SPS-Lite database and will answer any questions.

### **Reviewing current year and forecasted traffic**

Like Phase I, the SPS-Lite database will be geo-referenced to allow for easy mapping. An ArcMap project will also be provided to facilitate the display of data and the analysis

outlined for Phase II. The SPS-Lite application will also include reports that will facilitate the dissemination and review of the traffic database. The Rural Technical Committee should serve as a forum for reviewing and discussing the traffic data (current day and future forecasts) and performance measures contained in the SPS-Lite database. Each local government should be directed to review the traffic and forecasts on the Secondary road system. The VDOT Project Manager will coordinate a review with district and residency staff.

### **Comparing forecasts with high growth areas identified for the region**

The forecasts contained in the SPS-Lite application were developed based on historical growth trends. This approach may or may not be appropriate based on the characteristics of the area and the potential for development. For this reason it is important to compare these forecasts with expected growth trends to capture any growth that is reasonably expected to occur within the plan's horizon year of 2035. In Phase I, each PDC was asked to identify and map high growth areas. These maps should be overlaid with a map of traffic forecasts to identify any segments that may need to be adjusted. It is also suggested that the map of activity centers developed in Phase I be overlaid with this information to identify if any forecasts adjustments are warranted.

<b>Deliverable – Map(s) showing corridors at-risk for significant development/traffic growth</b>
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### **Comparing forecast with water/sewer extension plans**

The provision of sewer and water infrastructure can greatly influence land development. During Phase I, each PDC was asked to develop a regional layer/map of water sewer extension plans (if applicable). Since the provision of water and sewer infrastructure is a strong indicator of growth, each PDC should compare traffic forecasts with the sewer/water expansion plans to identify if any adjustments to the forecasts are warranted.

<b>Deliverable – SPS Phase II database containing 1) corrections/modifications to traffic forecasts. <i>NOTE – All proposed adjustments to traffic forecasts should be coordinated with your VDOT Project Manager. Please be sure to document the justifications for any adjustments to traffic forecasts in the comments field provided in the SPS-Lite application.</i></b>
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### ***Transit Demand***

Transit service is an important component of a complete transportation network. A goal of the Regional Long-Range Plan initiative is to work with each PDC to identify areas in need of new or expanded transit services to provide the general public with enhanced

mobility options and to enhance the mobility of disadvantaged groups such as the elderly and low-income populations. In Phase I each PDC was asked to develop a map of existing regional and local transit services as well as maps of elderly and low income populations. For Phase II each PDC, in cooperation with VDOT and DRPT, should use these layers to develop an overlay map to compare existing services with disadvantaged groups to identify gaps in service. The overlay map can be used to highlight areas to be considered for expanded transit services.

In addition to mapping, each PDC should conduct an interview of local/regional transit service providers. The two main objectives of these interviews are:

1. Compile an inventory/map of existing transit expansion plans
2. Solicit input from local/regional transit providers on where transit services or the expansion of services are needed

<b>Deliverables – Summaries of interviews with local/regional transit providers and existing transit expansion plans</b>
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## **Transportation System Performance**

### ***Capacity, Mobility and Safety***

#### **Review Link-Level Performance Measures in SPS-Lite**

The SPS-Lite application is a scaled down version of an application developed for transportation planners at VDOT. The SPS-Lite application to be provided for Phase II contains link level performance measures for mobility and capacity. The analysis is conducted and shown for both current year and horizon year performance. The application utilizes 2000 Highway Capacity Manual methodology and procedures. The data requirements to highway capacity analysis are quite extensive. Since the SPS database contains data on over 19,000 links, it is often difficult to have complete data for all the inputs to capacity analysis. In cases where a data element or elements are null the system will utilize default values. Example – the system does not contain a K factor (percentage of daily traffic occurring during the peak hour) – in this instance the system will utilize a default value (based on a comparison of other facilities with the same functional classification).

Considering the limitation above, it is imperative that the forecasts and performance measures in the SPS-Lite application be thoroughly scrutinized and reviewed. The application contains a feature that allows various reports to be generated for each jurisdiction (road inventory, traffic, performance, etc.). These reports should be printed and handed out to each local government for review. In addition, the VDOT project manager should coordinate a review of the performance measures with residency staff. The SPS-Lite application contains fields where revised performance measures can be inserted. The VDOT project manager is responsible for entering any revised traffic

forecasts and performance measures into the enterprise SPS database (internal to VDOT – not to be confused with SPS-Lite).

## **Review Safety Information**

Each CD-ROM contains GIS layers of VDOT’s Highway Safety Corridors. These layers cover the Interstate and Primary highway systems. Working in conjunction with VDOT staff, each PDC should review these layers to identify locations in need of additional safety analysis. The VDOT project manager should coordinate this review and the identification of locations for more detailed analysis with the VDOT Regional Operations Director (ROD) for that area. The ROD must support each location identified for additional analysis.

## **Locations for more in-depth analysis**

As outlined earlier, there are limitations to the SPS-Lite database. Realizing that it will not be the best tool for every situation we have made provisions for more detailed analysis. The Consultant Team will assist each PDC, in consultation with VDOT staff and the Rural Technical Committee, in identifying up to 35 locations (number not yet finalized) in need of more detailed analysis. These locations should be selected based on a review of the SPS performance measures for capacity and mobility as well as the review of the Highway Safety Corridors on the Interstate and Primary road systems. The consultant will conduct a more through analysis of these locations to identify problems and develop proposed solutions.

## **Review results of analysis**

Once the consultant has conducted the detailed analysis of the selected locations and developed draft recommendations, the PDC, in conjunction with VDOT staff and the Rural Technical Committee, will review the analysis and conclusions.

## **Identifying current and future year deficiencies**

### ***Capacity, Mobility and Safety***

#### **Roadways**

Based on the review of performance measures outlined above and the supplemental analysis conducted by the Consultant Study Team, each region will formally identify corridors and spot locations that have a current or projected future capacity or mobility deficiency or an identified safety problem. These locations will become the focus of Phase III to identify and agree on recommended solutions to the problems identified.

<b>Deliverable – SPS-Lite Phase II database containing corridors and spot locations flagged as deficient.</b>
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## **Transit Services**

Based on the transit demand analysis outlined earlier and the interviews with local/regional transit providers, each region will identify areas in need of new or expanded transit services. These locations should be identified on a map.

**Deliverable - Overlay map of existing regional and local transit services and concentrations of elderly and low-income populations with corridors/areas to consider expanding transit services.**

## **Intermodal Access**

VDOT will assist each PDC by conducting an assessment of intermodal access issues within each region. This analysis will include an adequacy assessment of roadway connectors and access to ports, inland ports, airports, transit stations, park and ride lots, and other major freight facilities. This assessment will include the development of recommendations to address any deficiencies identified, which will be coordinated with each PDC and Rural Technical Committee.

## ***Public Involvement***

The consultant contract will contain several provisions for public involvement. These include the development and maintenance of a website where the public can access information throughout the plan's development and provide comments. In addition, the consultant will host several outreach meeting throughout the state to traditionally under-represented populations (low-income, minority, populations with special needs and senior citizens). The consultant team will also take advantage of the meetings already being held for transportation improvement projects, as well as public meetings conducted by the PDC other state agencies, such as VDRPT. These "tag-along" opportunities make great sense since they already have built in audiences (and require less staff). The VHB Team will coordinate this effort with VDOT and each PDC to identify key opportunities to gather input for the regional plan.

While several public involvement activities will be coordinated by the consultant team, each PDC is strongly encouraged to supplement these activities with regional public involvement strategies. Each PDC should reference the public involvement guide that was developed during Phase I to identify any techniques or strategies that could be used to further strengthen public input and involvement for the plan's development. Here are some ideas of activities each PDC could undertake for public involvement:

- Include information on PDCs website
- Set up a booth at local mall or festival to solicit input on transportation problems
- Conduct a phone survey
- Meet with local community leaders to build awareness and solicit input
- Establish a Citizens Advisory Committee
- Attend a meeting of local community group (Ruritans, Optimists, Lions Club, etc)

## Rural Program – VDOT Contacts

PDC	VDOT Project Manager	TMPD Rural Planning Team Contact	District Planner
Lenowisco (PD1)	Bob Chandler 804-786-4723 <a href="mailto:Bob.Chandler@VirginiaDot.org">Bob.Chandler@VirginiaDot.org</a>	Bob Chandler	Donny Necessary
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<b>PDC</b>	<b>VDOT Project Manager</b>	<b>TMPD Rural Planning Team Contact</b>	<b>District Planner</b>
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