

Explanation of Amendments: Transportation Section

Technical Report Text

The following details comments and questions from VDOT and the Steering Committee and includes a summary on how each has been addressed within the technical report text or through other means:

The following changes were made to the technical report based on VDOT comments:

1. Requirements for Roadway Acceptance into the State's Maintenance System - Language on page T-8-12 has been amended at the recommendation of VDOT to further clarify how roads are added into the state system. Revised paragraph is below:

James City County has 189.81 lane miles of primary roads and 593.44 lane miles of secondary roads, all of which, as public roads, are maintained by VDOT. As described in the introduction, these roads serve various purposes and are classified according to their function, from *local roads* and collectors to arterials and freeways. New roads are constructed by either VDOT or private developers. Roads are added to the state system only if a developer constructs them to VDOT standards and *the County* petitions the state for acceptance in the maintenance system. Private roads exist in a number of areas throughout the County, in specific situations where ordinances permit them and private agreements are in place to ensure their continued maintenance. Long-range planning for the County's roadways is described at the end of the report.

2. Secondary Street Acceptance Requirements (SSAR) - Pedestrian Accommodation - VDOT noted that SSAR pedestrian requirements may be more stringent than County ordinance, particularly as the County does not always require pedestrian accommodation within subdivisions, while the SSAR does; VDOT staff requested language be inserted to that effect. The revised paragraph is below and can be found on page T-8-24:

The Secondary Street Acceptance Requirements also have important requirements for connectivity *and pedestrian accommodation. In certain circumstances, SSAR pedestrian requirements may be more stringent than County ordinances.* This has significant impacts on development approvals which the County will need to be mindful of during the development approval process.

3. Corridor Visions Language - At the recommendation of VDOT, a paragraph has been added regarding the I-64 widening. The County's Comprehensive Plan will be reviewed by the State before designing any enhancement project. The addition text regarding the vision for I-64 would be another opportunity for the County to convey its position on any widening of the interstate. Consistent with other communication on I-64 with the State, the following text was added on page T-8-32:

Interstate 64

Current traffic volumes warrant the expansion of the interstate from Newport News to Richmond. As the interstate serves as the primary gateway to the Historic Triangle, the State needs to take great care to

ensure the design of any expansion guarantees the highway will maintain its aesthetic character. The expansion should be built around the idea of corridor preservation and landscaping as the core design issue. It is recommended that in weighing various design proposals, VDOT explore the tradeoffs between widening the roadway within the median versus widening along the edge of the right-of-way in terms of preserving the natural topography and trees before any final plans are adopted.

4. Longhill Road Widening - There are no current plans to widen Longhill Road or Longhill Connector Road at this time; however, a location study for widening Longhill Road was planned to be conducted by VDOT until budget cuts put it on hold. To reflect this in the technical report, the following language was added on page T-8-34:

Based on current and projected volumes for Longhill Road from Route 199 to Olde Towne Road an additional travel lane northbound is recommended. Projected 2030 volumes indicate the need to widen Longhill Road from Olde Towne Road to Centerville Road. The County's preference is to not widen Longhill Road in this segment until more detailed study demonstrates the need and provides an acceptable context-sensitive transportation solution. *A location study for widening Longhill Road was planned to be conducted by VDOT to determine what options can realistically be implemented to increase capacity and improve safety for all users; however, this study has been put on hold due to state budget cuts.* It is encouraged that future development accommodate a multi-use path along the corridor for pedestrian and bicycle accommodation.

5. Greensprings and the Capital Trail - VDOT recommended adding a brief discussion of the Greensprings and the Capital Trail. Staff responded by drafting the following text for page T-8-12:

Two of James City County's most popular trails are the Greensprings Greenway Interpretive Trail and the Capital Trail. The Greensprings Trail is a three mile soft surface trail that loops through a landscape of ponds, wetlands and forests. The trail is on wetlands adjacent to Mainland Farm, the oldest continuously cultivated farm in America. The trailhead at Jamestown High School provides convenient parking and access to the Virginia Capital Trail. The multi-use path for Capital Trail will link Jamestown and Richmond upon completion. Though both trails are maintained by VDOT, the County will work in cooperation with the state and other local agencies to ensure its continued adequacy for its users.

6. Traffic Counts - At the recommendation of VDOT, the following sentence was revised on page T-8-30:

To monitor the ability of state maintained roads to continue meeting the needs of residents, businesses, and visitors, VDOT and the County regularly count traffic on most arterial and collector streets. As VDOT conducts counts every other year, the County conducts the counts on off years to avoid duplication. ~~*These counts are closely monitored to see if and where improvements such as turn lanes and traffic signals are approaching warrants.*~~ *Traffic counts are generally used to evaluate growth trends and predict when and where capacity improvements should be focused.* Attached is a copy of the County's latest traffic counts from 2007.

7. Hampton Roads Metropolitan Planning Organization (HRMPO) - In May 2009, the HRMPO changed its name to the Hampton Roads Transportation Planning Organization (HRTPO). All references to the HRMPO in the technical report have been changed to HRTPO. The following text originally on page T-8-6 has been deleted as the name change has already occurred:

~~The HRMPO recently proposed a name change from The Hampton Roads Metropolitan Planning Organization to the Hampton Roads Transportation Planning Organization (HRTPO). This matter is currently out for a 30-day public review and comment period. The MPO Board is expected to make a final determination on the name change at their May 20, 2009 meeting.~~

8. Route 60 Relocated - The following text was added to page T-8-33:

Route 60 East Relocation/Pocahontas Trail

A relocation and upgrading project, this realignment will divert traffic from Pocahontas Trail, which experiences traffic congestion from industrial and tourist traffic. This proposed route parallels existing Pocahontas Trail adjacent to the CSX Railroad and then extends across the GreenMount property and Skiffe's Creek and into Newport News, where it will connect the Route 60 East/Fort Eustis Boulevard interchange. This four-lane facility is necessary to promote future industrial development in the Skiffe's Creek industrial area and to meet local traffic needs. The traffic modeling suggests that Pocahontas Trail needs to be a four-lane facility in both the section extending from the York County line to BASF Road and the section extending from BASF Road to the Newport News line. The project has been split into two phases, with the intent to widen or relocate the section from BASF Road to the Newport News city line first, and then assess the need for widening or relocating the upper section. If possible, the County would like to avoid widening the upper section. *The projected cost of the two phases of relocating Route 60 is \$68 million.* Careful coordination of transportation and development is extremely important along this road as, in the near term, funding for any improvements is unlikely. Also, the County should investigate connections between Pocahontas Trail, Merrimac Trail, and Interstate 64. *The projected cost for the Skiffe's Creek Connector is \$35 million.* The addition of left turn lanes along Pocahontas Trail from the fire station to Newport News would be a cost-effective temporary solution until the new alignment is in place. Due to the high traffic volumes, pedestrian accommodation should be provided by an adjacent multi-use trail rather than sidewalks abutting the road. *The projected cost for the total project is \$103 million.*

As part of VDOT's 527 requirements for Comprehensive Plans, the preceding text was added along with 2035 traffic projections and a map serving as the County's inventory of roads within the Federal Aid System. These items have been attached for your reference.

The following changes were made to the technical report and GSA's based on Steering Committee comments:

1. Road Capacity and Level of Service - As a result of the discussion about road capacity and LOS standards, a definition and an explanation of how the County utilizes Level of Service

predictions during review of development proposals was added to page T-8-27. The following text was added:

Two terms which are often used to describe the performance of roads and intersections are capacity and Level of Service. Road capacity is the rate at which vehicles can reasonably be expected to traverse a section of roadway under ideal conditions. Ideal conditions include adequate roadway geometric design and the free flow of traffic. For arterial roadways, the ideal capacity is usually set at 1,900 vehicles per lane per hour. It is adjusted downward at intersections, where conflicts occur, and where roadway geometry reduces the speed at which vehicles can move safely. While capacity is a static metric independent of volumes, Level of Service (LOS) indicates the deterioration of the vehicle flow rates as increasing volumes approach the capacity of the roadway. With increasing volumes and decreasing maneuvering space, the ability of motorists to maintain free flow speeds is compromised, average vehicle speeds decline, and the flow rate along the arterial roadway decreases.

As an operational measurement, Level of Service is determined by the amount of delay at an intersection or by the density of vehicles on a road segment. A level of service can be determined at both a micro and macro level from individual turning movements to intersections and roadways. For example, a car attempting a left turn may have to wait 60 seconds to execute the movement, while the traffic in an adjacent thru lane passes by in free flow conditions. In this example, the LOS of the left turn would be "E" or "F" while the LOS of the thru lane would be "A." Depending on the volumes for each movement, the intersection as a whole may operate at a LOS "A," masking the failure of the left turning movement. LOS can also be affected by traffic conditions at different times of day.

James City County uses both measurements during transportation planning and development review. For instance, per ordinance requirements, if a development proposal is projected to generate 100 or more peak hour vehicular trips as determined by the Institute of Transportation Engineers standards, the applicant must submit a traffic impact study (TIS) demonstrating the effect of development proposal on the road network. During consideration of a rezoning or special use permit application, the Board of Supervisors uses the results of the TIS as one factor in its decision-making process. Among other issues weighed in previous development proposals, the County is generally supportive of projects that do not degrade surrounding streets and intersections below a LOS "C." In practical terms, this means that the signalized intersection providing access to the development can not cause more than 35 seconds of delay and development generated traffic does not destabilize the traffic flow on the surrounding streets.

The County does not have policy requiring a specific LOS be met; the expectations are often nuanced in terms of other factors at play such as the character of the road, the desire for high density development, or a focus on pedestrian and transit oriented development for example. Therefore, traffic impact has been used as one factor in the overall development review process. New Town is an example where the Board has accepted a LOS of less than "C" for lane groups to allow a more urban, pedestrian-friendly environment.

Additionally, the following terms have been added to the glossary:

Lane Capacity–The hourly rate at which vehicles can reasonably be expected to traverse a uniform section of a lane during a give time period.

Level of Service (LOS)—Qualitative measures that characterize operational conditions within a traffic stream and the perception of these conditions by motorists and passengers.

Context-Sensitive Solutions—Context sensitive solutions (CSS) is a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist.

Amended Goals, Strategies, and Actions

The following details questions and comments from the Steering Committee at the May 18th meeting and includes a summary of how each has been addressed within the Goals, Strategies, and Actions or through other means:

- **Revised Goal** - Provide citizens, businesses, and visitors of James City County with an efficient, safe, and attractive multimodal transportation system *that reinforces or is consistent with the goals and land use patterns of the Comprehensive Plan*. (as recommended by Ms. Leverenz)
- **Revised Action 1.1.3** - Identify road segments with future moderate to severe road capacity deficiencies and develop a plan to mitigate congestion *utilizing at least that may include one or more* of the following actions: (as recommended by Ms. Leverenz)
- **Revised Action 1.1.5** - ~~Develop a plan to fund the road improvements recommended by the Comprehensive Plan. Increase coordination~~ *Coordinate with* between the Virginia Department of Transportation (VDOT), adjoining jurisdictions, and prospective developers *to implement and recommend* the most contextually appropriate improvements for the roadway system ~~in response to traffic impact analysis and/or proffer negotiations for proposed developments. (See Land Use.)~~ (as recommended by Ms. Leverenz and further refined by staff)
- **Revised Action 1.3.11** - Implement the adopted James City County Sidewalk and Trail Plan and Regional Bicycle Facilities Plan by planning for bikeways and pedestrian facilities in primary and secondary road plans and projects. ~~Encourage~~ *Amend the Zoning Ordinance to require* by-right developments to participate in the development of the facilities. (as recommended by Mr. Porter)
- **Revised Action 1.2.1** - Continue to participate in the Hampton Roads ~~Metropolitan~~ *Transportation* Planning Organization (*HRTPO*), *which serves as* the transportation planning body for the region. (revised based on the HRMPO name change to HRTPO)
- **Regarding Action 1.1.5** - Mr. Porter noted that the action appears to promote construction when VDOT already stated maintenance is priority. Staff envisions this action being used to guide staff during proffer negotiations where enhancements would

be completed at the developer's expense. VDOT does not solicit comments for maintenance items.

Responses to Various Steering Committee Questions

Below are responses to questions raised during previous transportation meetings.

1. Proposed Croaker Road Extension - Maps have been created illustrating the proposal and will be posted on the website for Committee and public review. During the last meeting, it was the consensus not to include it in the Comprehensive Plan discussion or GSAs, but rather to list it as an item to be reviewed and evaluated prior to the next Comprehensive Plan revision. Staff was also to consider including the road in the model for use at the Planning Commission level. The consultant voluntarily went ahead and examined the proposed Croaker Road extension and found the improvement provided marginal benefit.

2. Eastern State Hospital - Committee members asked what effect Eastern State Hospital would have on the roadway infrastructure if the proposed development scenario outlined in the Crossroads Report was implemented. To respond to the question, staff analyzed the Eastern State Conceptual Plan and with the help of the consultant, predicted the following trip generations:

As generated from the Eastern State Conceptual Plan:

LAND USE	SIZE (SF)	DAILY TWO-WAY TRIPS
Geriatric Research Facility	192,000	1,455
Elementary School	650,000	839
Senior Housing	398 DU	1,385
Transitional Housing	303 DU	1,760
Retail	39,000	1,675
Office	635,000	6,991
Park & Conservation Center	17,000	1,500
Total		15,605

Based upon this information, the consultant concluded that the following road segments would need improvement:

- Longhill Connector Road from Longhill Road to Ironbound Road - widen to 4 lanes.
- Ironbound Road from Longhill Connector Road to Monticello Ave. - This is already programmed to be widened to four lanes.
- Longhill Road from Longhill Connector Road to Centerville Road - widen to 4 lanes.

Note that all of these are segments are projected to need improvements in all scenarios. According to the consultant, the proposal would add traffic to Route 199, but not enough to degrade the service levels. The site is currently zoned Public Land and designated Federal State and County land; there is no land use designation change application for this site.

4. Road Widening Survey Results - The follow table is the tally of Committee member responses when asked about the acceptability of widening certain road segments. The table below tracks Steering Committee responses to the question of whether the following road segments should be widened when traffic conditions warrant improvement. Purple highlights are for roads which are designated as Community Character Corridors. Green highlights indicate when a majority of the committee indicated widening would be acceptable. Red highlights indicate when a majority of the committee indicated that widening would not be acceptable.

Road	from	to	Lanes	Distance	yes	no
Centerville Rd	Rte 60	Jolly Pond Rd	2	1.4	8	
Centerville Rd	Jolly Pond Rd	Longhill Rd	2	1.0	8	
Croaker Rd	Rte 60	Rochambeau Rd	2	0.7	8	
Ironbound Rd	Monticello Ave	John Tyler Hwy	2	1.9	3	5
Jamestown Rd	Rte 199	Ironbound Rd	2	2.4	1	8
John Tyler Hwy	Ironbound Rd	Rte 199 / Strawberry Plains Rd	2	2.4	1	8
Longhill Connector Rd	Longhill Rd	Ironbound Rd	2	0.6	7	
Longhill Rd	Longhill Connector Rd	Rte 199	2	0.3	8	
Longhill Rd	Springs West Road	Centerville Rd	2	2.5	5	3
Longhill Rd	Old Towne Rd	Springs West Rd	2	1.4	5	3
Longhill Rd	Rte 199	Old Towne Rd	2	0.8	7	1
Monticello Ave	Rte 199	News Rd	4	0.3	7	1
Monticello Ave	News Rd	Centerville Rd	2	2.8	5	2
Old Towne Rd	Rte 60/Richmond Rd	Longhill Rd	2	1.4	6	1
Pocahontas Trl	Rte 199	Kingsmill Gate	4	0.6	7	1
Pocahontas Trl	Kingsmill Gate	Grove Interchange	4	1.2	7	1
Rte 199	Jamestown Rd	John Tyler Hwy	4	0.4	5	2
Croaker Rd	Rochambeau Rd	I-64	4	0.2	6	1
Monticello Ave	Ironbound Rd	Rte 199	4	0.8	5	2
Neck-O-Land Road	Gatehouse Drive	Jamestown Rd	2	0.5	3	5
Rochambeau Dr	Bridge Road (Stonehouse)	Croaker Rd	4	0.7	6	1
Rte 60 / Richmond Road	Rochambeau Rd	Croaker Rd	4	3.2	5	2
John Tyler Hwy	Centerville Rd/Greensprings Rd	Ironbound Rd	2	2.5	2	7
Mooretown Road Extended	Route 199	Croaker Rd	0	1.3	5	2
Centerville Rd	Longhill Rd	News Rd	2	1.1	6	
Croaker Rd	I-64	Fenton Mill Rd	4	0.4	6	1
News Rd	Centerville Rd	Powhatan Secondary	2	2.2	1	6
News Rd	Powhatan Secondary	Monticello Ave	2	0.8	1	6