

## STARS II UPDATE

Using the STARS II program, District offices will be able to leverage Statewide Planning and Research funding to help identify, plan, conceptually design, and ultimately program projects that reduce congestion and improve safety throughout the state. The Transportation and Mobility Planning Division (TMPD) is proud to release the first edition of the quarterly STARS II program newsletter. As you will see in this newsletter much has been accomplished during the first year of STARS II. We are looking to accomplish even more in 2013!

**Thank you for reading this newsletter.  
We hope it spurs your interest and  
understanding of the STARS II program!**

**Bill Guiher, Chad Tucker, Robin Grier, and Stephen Read  
STARS PROGRAM MANAGEMENT TEAM**

**DID YOU KNOW?** For the first time ever, MAP-21 apportionments for safety dollars exceeded those for CMAQ dollars.

## FEDERAL CONGESTION AND SAFETY NEWS FHWA Focuses on Congestion Relief

Between 1980 and 1999, lane-miles of highways increased 1.5 percent while vehicle miles of travel increased 76 percent. This is one of the considerations influencing FHWA's decision to focus on a number of high priority efforts to reduce congestion, including:

- Tolling and value pricing
- Traffic incident management
- Public-private partnerships
- Work zone mobility
- Real-time traveler information
- Traffic signal timing

Read more about this topic at the link below.

Source: [www.fhwa.dot.gov/congestion](http://www.fhwa.dot.gov/congestion)

## Proven Safety Countermeasures

Improving safety is a top priority for the U.S. Department of Transportation, and FHWA remains committed to reducing highway fatalities and serious injuries on our Nation's highways. We are highly confident that certain processes, infrastructure design techniques, and highway features are effective and their use should be encouraged. Read more about this topic at the link below. Strategies Involve:

- Roundabouts
- Road diets
- Corridor access management
- Rumble strips
- Medians and pedestrian crossing islands
- Enhanced delineation and friction for curves

Read more about this topic at the link below.

Source: [www.safety.fhwa.dot.gov/provencountermeasures](http://www.safety.fhwa.dot.gov/provencountermeasures)

## STARS II NEWS

### Program Website

The STARS II Website is now live!

Check it out at: [http://www.virginiadot.org/projects/stars\\_ii.asp](http://www.virginiadot.org/projects/stars_ii.asp).

This website includes a Google-based map with all of the previous STARS study locations and recommendations identified. Once the user clicks on the location of a specific project, information about when the study and/or design was completed, the types of improvements that were recommended, and a corresponding planning level cost estimate are provided.

### Projects Underway

- I-77/I-81 Overlap Transportation Study – Wythe County
  - Corridor study to develop feasible short- and long-term projects
  - Planning level cost estimates
  - CORSIM modeling software to be used
- I-95/I-64 Overlap/Belvidere Street Interchange – City of Richmond
  - Interchange modification study
  - Preliminary roadway design plans
  - Cost estimates and schedule for SYIP
  - VISSIM modeling software to be used
- US 58 Route Alternative Study – Town of Duffield to Town of Stickleyville
  - Route alternatives analysis
  - Cost estimates for truck climbing lanes over mountain
  - Cost estimates for improvements to alternate route
- I-264 / Ballentine Boulevard Interchange – City of Norfolk
  - Interchange modification study
  - Preliminary roadway design plans
  - Cost estimates and schedule for SYIP
  - VISSIM modeling software to be used

**PROJECT SPOTLIGHT**

**I-77/I-81 Overlap Auxiliary Lane Project**

**WYTHE COUNTY, VA**

During weekends in the summer months, the Interstate 77 corridor between the North Carolina border and Interstate 81 becomes severely congested with backups reaching up to six miles just south of the I-81 interchange. Based on the Tier 2 Environmental Impact Statement (EIS) completed in May 2012, the Commonwealth Transportation Board selected the location for the I-77/I-81 overlap in Wythe County choosing Candidate Build Alternative B, which adds one travel lane in each direction to the overlap. The cost estimate for Alternative B is \$457 million and includes preliminary engineering, right of way, and construction. Funding has not yet been identified for these project phases.

With the ultimate solution being out of reach from a financial standpoint, the District began discussing the need to develop smaller, more focused improvements that could be used as candidates for the Six-Year Improvement Program (SYIP). The auxiliary lane project was the first step in this process and aligned well with the goals and criteria of the STARS II program. One goal of this I-77/I-81 Overlap Auxiliary Lane project was to determine if adding an auxiliary lane in the southbound direction on I-81 between Exit 81/ Exit 32 and Exit 80 would improve operations on I-77/I-81 overlap. Another goal of the project was to determine if a truck climbing lane on northbound I-77 would improve congestion at Exit 32/Exit 81. As has been the case with several of the STARS II projects, this project benefited from a sharing of costs between the STARS II program and District pre-scoping funds. The Bristol District funded the preliminary survey for this project while the STARS II program funded the traffic analysis, Interchange Justification Report (IJR), conceptual design, and cost estimates.

The results of the project show that both auxiliary lanes provide improvements to current congestion issues and can be constructed within the current right-of-way for an approximate construction cost of \$10 million. The Bristol District plans to program this project into the SYIP.



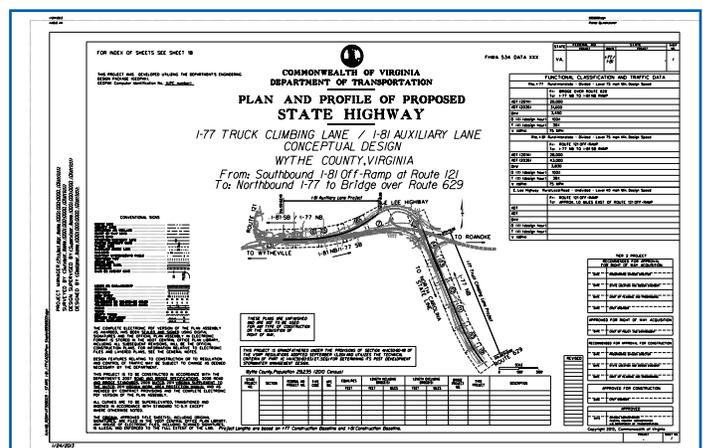
Ramp to Southbound I-81 at Exit 81



Location of Northbound I-77 Auxiliary Lane



Congestion along Northbound I-77



I-77 Truck Climbing Lane / I-81 Auxiliary Lane Conceptual Design

INTERVIEW WITH A STAR

**Chad Tucker**  
SHORT RANGE  
PLANNING MANAGER



★ How have the STARS II funds helped the districts so far?

Web-based congestion and safety maps were created for each district to help the districts identify locations where high crashes and congestion converge. Under the STARS program, the Districts are leading a project development process that integrates planning and preliminary engineering to document program-ready projects for congestion reduction and safety improvement. Speed is key - with plans and documentation developed in months, not years. The resulting reports are concise and to the point so you don't have to dig through a three-inch thick report to understand the problems, solutions, costs, and benefits. The Districts are benefiting from a more focused and rapid study development process.

★ How does STARS II fit into the project development process?

This program is not designed to develop the ultimate fix, but instead to develop an interim solution, conscious of our limited resources, that can be implemented in the short-term. We are attempting to attack complex and overwhelming congestion and safety challenges with limited resources... sometimes you have to move a mountain one shovel at a time.

★ What are some lessons learned from STARS II?

1. Identify all of the key players and functions that need to be involved in the project scoping process
2. Get all of these key players at the table together to discuss the project scope and goals
3. Ensure key players are active and engaged throughout the process.

★ Who are some of the key players in these projects?

1. District Transportation Planners
2. Regional Traffic Engineers
3. District L&D Engineers
4. Regional Operations Directors
5. Planning and Investment Managers
6. Local Jurisdiction Representatives
7. FHWA Area Engineers
8. MPO/PDC Representatives

★ How has the STARS program evolved over time?

We moved away from focusing on just high crash locations to locations with congestion and safety deficiencies. In addition, we are now getting the right people at the table at the right time to get the right project scope developed. We are focused on developing projects that are program ready.

★ How can I get involved and leverage the STARS program?

Contact your District Planner, Traffic Engineer, or Planning and Investment Manager and request more information. Each District can submit STARS study proposals to TMPD. The form can be accessed [here](#). The Districts that are getting the most out of the program are the ones who are putting the most into it.

MOVING AHEAD FOR PROGRESS  
IN THE 21<sup>ST</sup> CENTURY (MAP-21)

