Chapter 10. Conclusions

10.1 Recommended Roadway Configuration

Throughout the study process, multiple considerations were taken into account when developing alternatives. The alternative development process began with a universe of alternatives incorporating multiple combinations of traffic operations, transit, roadway, and environmental considerations. Through screening, modeling, and input from citizens and stakeholders, a final alternative was developed. The final alternative combines the traffic and operational needs of the forecast volumes and minimizes impacts to properties and environmental resources.

The recommended build alternative for US Route 1 between Joplin Road/Fuller Road and Telegraph Road is a continuous six-lane cross section with dual left-turn lanes and a dedicated right-turn lane on most approaches. An eight-lane alternative south of Russell Road was considered due to high projected traffic volumes. However, this was eliminated because final traffic analysis did not justify the need for extra capacity and the additional impact to existing businesses along the corridor was not supported by the project stakeholders.

North of the Russell Road interchange, the proposed alignment maintains the existing centerline in efforts to minimize impacts to Locust Shade Park to the west and military housing to the east.

The recommended alternative for the interchange of US Route 1 at Russell Road is the hybrid Alternative G, with a signalized intersection west of US Route 1 and a half cloverleaf interchange. While this alternative results in unavoidable impacts to environmental resources, it also minimizes the environmental concerns of taking property from Locust Shade Park and satisfies the security requirements of uninterrupted traffic flow in the vicinity of the Marine Corps Base (MCB) Quantico Back Gate.

South of Russell Road, three alternatives for alignments were studied. Based on analysis of potential impacts and input received from stakeholders and citizens, the final recommended alternative maintains the existing centerline as to balance impacts to businesses and residences along each side of the corridor; however, alternative alignments of Route 1 in the vicinity of the Telegraph Road intersection (Boswell's Corner) were studied. Additional cost-benefit analysis of these alignments is needed in future phases of design and environmental documentation.

Adjustments to the roadway's horizontal and vertical geometry are also recommended to bring the road to current Virginia Department of Transportation (VDOT) design and safety standards.

10.2 Pedestrian and Bicycle Accommodations

Throughout the project process, stakeholders and citizens provided feedback regarding the existing lack of safe and connected bicycle and pedestrian facilities throughout the corridor. As a result of this input and to remain consistent with previous jurisdictional plans, a 10-foot multi-use path is recommended on the west side of US Route 1 and a six-foot sidewalk on the east side of US Route 1. In addition to these facilities, all intersections should be designed with pedestrian facilities that provide for connectivity and ensure safety. Examples of these improvements include:

- High-visibility crosswalks
- Pedestrian refuges
- Americans with Disabilities Act (ADA)-compliant curb ramps
- ADA-compliant pedestrian call buttons

- Count-down pedestrian signal heads
- Advance pedestrian warning signs

As part of a conceptual design for traffic signal layout, pedestrian connections at the study area intersections and the Russell Road interchange were developed. These can be found in the Appendix. Detailed design of these facilities will occur in future design of US Route 1.

10.3 Transit and Transportation Demand Management (TDM) Accommodations

During the preliminary analysis phase of this study (described in **Chapter 5**), the potential for a transit- and high-occupancy vehicle (HOV)-only lane as part of the roadway configuration was examined. It was determined that the transit and carpool ridership in this area was not sufficient to warrant a dedicated lane. A dedicated lane would also cause the general purpose lanes to become more congested.

However, with growth expected in the corridor area, it is vital to make accommodations for transit users, both local and long distance. Multiple transportation studies have recommended expansion of local regional bus service in this corridor connecting with the future I-95 Express Lanes. Future design should incorporate roadway modifications that include bus stops with appropriate amenities for riders.

Transportation demand management (TDM) is the application of strategies and policies to reduce travel demand (specifically that of single-occupancy private vehicles). A demand management approach to transportation has the potential to deliver better environmental outcomes, improved public health, stronger communities, and more prosperous and livable places. The following TDM strategies could improve travel demand and help to reduce congestion on US Route 1 and surrounding facilities:

- New park-and-ride lots for commuters
- Supporting shuttle service within MCB Quantico and surrounding facilities
- Neighborhood circulators
- Promoting knowledge and use of TDM and regional commuter services
- Encouraging employer incentives for carpooling/teleworking/transit use

10.4 Potential Environmental Impacts

The Project proposes potential impacts to prime farmland and farmland of statewide importance; some wetlands and surface waters, particularly around the US Route 1/Russell Road interchange; 100-year floodplains; Chesapeake Bay Protection Act (CBPA) mandated Resource Protection Areas; architectural and archaeological resources that are eligible for listing on the National Register of Historic Places (NRHP); and parks and recreational facilities. Further studies are required to determine impacts related to wildlife and habitat, endangered species, air quality, noise, and hazardous materials. No impacts to community services and facilities are anticipated.

10.5 Moving Forward

The high-level planning recommendations of this corridor study provide a framework for the improvement of the US Route 1 corridor in Stafford and Prince William Counties. This report identifies the transportation and safety needs of the corridor. It addresses the potential transportation and environmental impacts that the suggested improvements would have to the corridor and surrounding areas.

In May 2011, Stafford County approved a Redevelopment Plan for Boswell's Corner which envisioned the area surrounding US Route 1 in the area roughly from Telegraph Road to Corporate Center Drive as a target area for commercial and residential growth.

The US Route 1 envisioned in this report serves as an interim step towards Stafford County's vision of US Route 1. Widening of the road from the existing four lanes to six lanes with pedestrian and bicycle facilities will begin the process of this ambitious yet achievable vision set by Stafford County.

In 2004, Prince William County approved a proposed cross section and alignment for US Route 1 that was developed as part of the US Route 1 Location Study for Fairfax and Prince William Counties. A comparison of the recommendations of this study and the 2004 Location study can be found in **Chapter 7.**

Comprehensive and transportation plans for both Stafford County and Prince William County as well as the Fredericksburg Area Metropolitan Planning Organization (FAMPO) include the widening of US Route 1 in the study area from four to six lanes. Prince William County has identified that, currently, funding is not available for any improvements to US Route 1 in this study area in the near term. MCB Quantico has noted that any property acquisitions from MCQ Quantico will require a real estate action/agreement with the US Department of Navy and that improvements near security gates must meet appropriate military standards. Continued cooperation will be needed between local jurisdictions, transportation agencies, military organizations, and local citizens in order to move toward implementation of this report's recommendations.