







**SHA CTP Project No. MO891A21, US 29, Fairland Road to Musgrove Road Interchange Improvement, Design Review**

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**Completed: 4/30/15**

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**Description**

- Columbia Pike (US 29)/Fairland Road interchange, including the closure of Musgrove Road across US 29
- (Future) Applicant – Maryland State Highway Administration
- 1997 *Fairland Master Plan*

**Summary**

The Project is an interchange at Columbia Pike (US 29), Fairland Road to Musgrove Road. The 1997 *Fairland Master Plan* recommends interchanges at both Fairland Road and Musgrove Road, but SHA’s current approach to this project would close the existing at-grade intersection with Musgrove Road with the new interchange at Fairland Road only. Refer to Attachment No. 1 showing SHA’s current 15% intersection design. Currently, both intersections of Fairland Road and Musgrove Road with US 29 are signalized at-grade intersections.

The purpose of this design review is to solicit the Planning Board’s comments on the 15% design plan that will be developed in greater detail for presentation to the Board as a Mandatory Referral, anticipated to be in June this year. Planning Department staff is requesting that the Planning Board’s comments and recommendations on the issues be transmitted to SHA in advance of the Mandatory Referral.

**Background**

The County’s master plans relevant to this area recommend grade-separated interchanges along US 29 from New Hampshire Avenue north to the Howard County line. The recently adopted *White Oak Science Gateway Master Plan* includes on page 57 that roadway improvements outside the Plan boundaries include individual grade-separated interchanges at US 29/Musgrove Road and US 29/Fairland Road. The planning for the subject interchange dates back to the 1998 Final Environmental Impact Study. SHA put the design on hold after a 2000 public hearing; the US 29/ICC interchange was subsequently constructed to the north of Fairland Road; and this project was restarted in 2013. The current proposal under consideration by the County Council for funding intersection improvements in the White Oak area would not fund interchanges on US 29.

## **Nearby Related Transportation Projects**

Ultimately, a completely grade-separated facility is planned along US 29 between the New Hampshire Avenue (MD 650) interchange and the Howard County line (see Attachment No. 2). Of the ten interchanges proposed along US 29, five interchanges are built including the nearby interchanges at the Intercounty Connector in 2011 and Briggs Chaney Road in 2007. Four others are not yet funded for design including the nearby interchange at Tech Road-Industrial Parkway.

## **Master Plan Consistency**

In accordance with the *1997 Fairland Master Plan*, *2005 Countywide Bikeways Functional Master Plan*, and *2013 Countywide Transit Corridors Functional Master Plan*, the impacted roadways are designated as follows:

### **Columbia Pike**

The *Fairland Master Plan* designates Columbia Pike as a 6-lane divided controlled major highway (CM-10) with a 100-to-200-foot wide right-of-way and a Class I (PB-66) bikeway. The *2005 Countywide Bikeways Functional Master Plan* recommends a dual bikeway, DB-9, with bike lanes and a shared-use path.

The *2013 Countywide Transit Corridors Functional Master Plan* recommends the Bus Rapid Transit (BRT) Corridor 9, "US 29 Corridor" along Colesville Road/Columbia Pike between the DC Line and Spencerville Road (MD 198). The nearest BRT station is at the intersection of US 29 and Fairland Road.

### **Fairland Road**

The *Fairland Master Plan* designates Fairland Road as an arterial (A-75) with an 80-foot wide right-of-way and a Class I (PB-50) bikeway. Along Fairland Road, the *2005 Countywide Bikeways Functional Master Plan* recommends bike lanes, BL-13, west of US 29 and a shared-use path, SP-18, east of US 29.

### **Musgrove Road**

The *Fairland Master Plan* designates Musgrove Road as a two-lane arterial (A-100) with an 80-foot wide right-of-way, sidewalks, and no bikeway. A bikeway is not recommended in the *2005 Countywide Bikeways Functional Master Plan*. The *1997 Fairland Master Plan* has no specific recommendation on Musgrove Road other than the interchange shown on Figure 38 on page 89 (see Attachment No. 3).

### **Old Columbia Pike**

The *Fairland Master Plan* designates Old Columbia Pike on the west side of US 29 as an arterial (A-99) with an 80-foot wide right-of-way and a Class I/II (EB-13) bikeway. The *2005 Countywide Bikeways Functional Master Plan* recommends bike lanes (BL-12) along Old Columbia Pike.

## **Considerations Concerning Closing Musgrove Road at US 29**

### **If the Musgrove Road crossing at US 29 was closed:**

- Pro: The 2014 Value Engineering analysis estimated cost saving is \$517,000 by eliminating the proposed bridge as shown on Attachment No. 1.
- Pro: Not building a bridge over US 29 at Musgrove Road would eliminate the need to accommodate the grading for the bridge and need to acquire additional right-of-way for other design elements.
- Pro: The nearby intersections are still forecasted to operate at a level of service D or better in the year 2040 with Musgrove Road closed.
- Pro: No existing transit service operates on Musgrove Road across US 29.
- Pro: No existing or master-planned bikeways along Musgrove Road across US 29.
- Pro: Not building a Musgrove Road bridge over US 29 will avoid impacts to the Julias Marlow House (circa 1783-1805), a Master Plan for Historic Preservation-listed historic site (M:34/8) located in the southeast corner of Musgrove Road and US 29.
- Con: Direct local circulation will be cut off for the businesses and community located on opposite sides of US 29, although the adjacent land uses on each side are low-traffic generating and have viable alternative routes.
- Con: The entrance and exit ramps to and from US 29 are confusing to unfamiliar motorists.

### **If the Musgrove Road crossing at US 29 remains open:**

- Pro: The estimated cost saving of \$517,000 is relatively small compared with the estimated \$84,500,000 construction cost.
- Pro: Direct local circulation will remain for the businesses and community located on opposite sides of US 29.
- Con: If Musgrove Road is not closed, it could delay completion of SHA's 30% design plans; however the project is not yet funded for construction.

### **If the Musgrove Road crossing at US 29 was closed or remains open:**

Although the north-south peak-directional traffic still impacts the at-grade intersections south of New Hampshire Avenue, the interchanges along US 29 improve east-west travel by reducing delay crossing the congested at-grade intersections with US 29.

## **US 29 On and Off Ramps Design**

The current 15% design of US 29 and its ramps were developed to provide safe weaving distances between the subject project's ramps and those of the existing US 29/Intercounty Connector interchange. The on and off ramps design may seem circuitous but SHA believes that it is the optimal configuration among the alternatives studied and motorists will learn how to use the interchange ramps.

## **Other Project Topics**

Other topics will be presented in greater detail to the Board as a Mandatory Referral anticipated in June this year including existing conditions, forest conservation and environmental requirements, proposed typical sections, right-of-way acquisition, park impacts, noise assessment, historic preservation, utilities and lighting, forecasted vehicular traffic volume and intersection congestion levels.

## **Public Outreach**

Following the public hearing held before 2000, another public hearing was held on March 24, 2015, at the Paint Branch High School located near the proposed interchange. Citizens at the hearing expressed concern that the proposed Musgrove Road closure at US 29 would exacerbate already confusing traffic circulation patterns associated with the completed US 29 interchanges with the Intercounty Connector and Briggs Chaney Road.

## **Conclusion**

The project is at the 15% design stage and this is the most appropriate point at which major conceptual planning issues should be addressed and decided, especially since SHA is at 15% design plans that resulted in design alternative evaluation and selection. Without SHA providing an opportunity for the Planning Board to make recommendations of design alternatives, staff is concerned that it will be too late to provide the Board's review and input of the interchange's selected alternative design when SHA submits the Mandatory Referral in June. We recommend that the Planning Board receive the briefing on the project and the issues outlined above and provide comments to SHA as to how this project should be proceed.

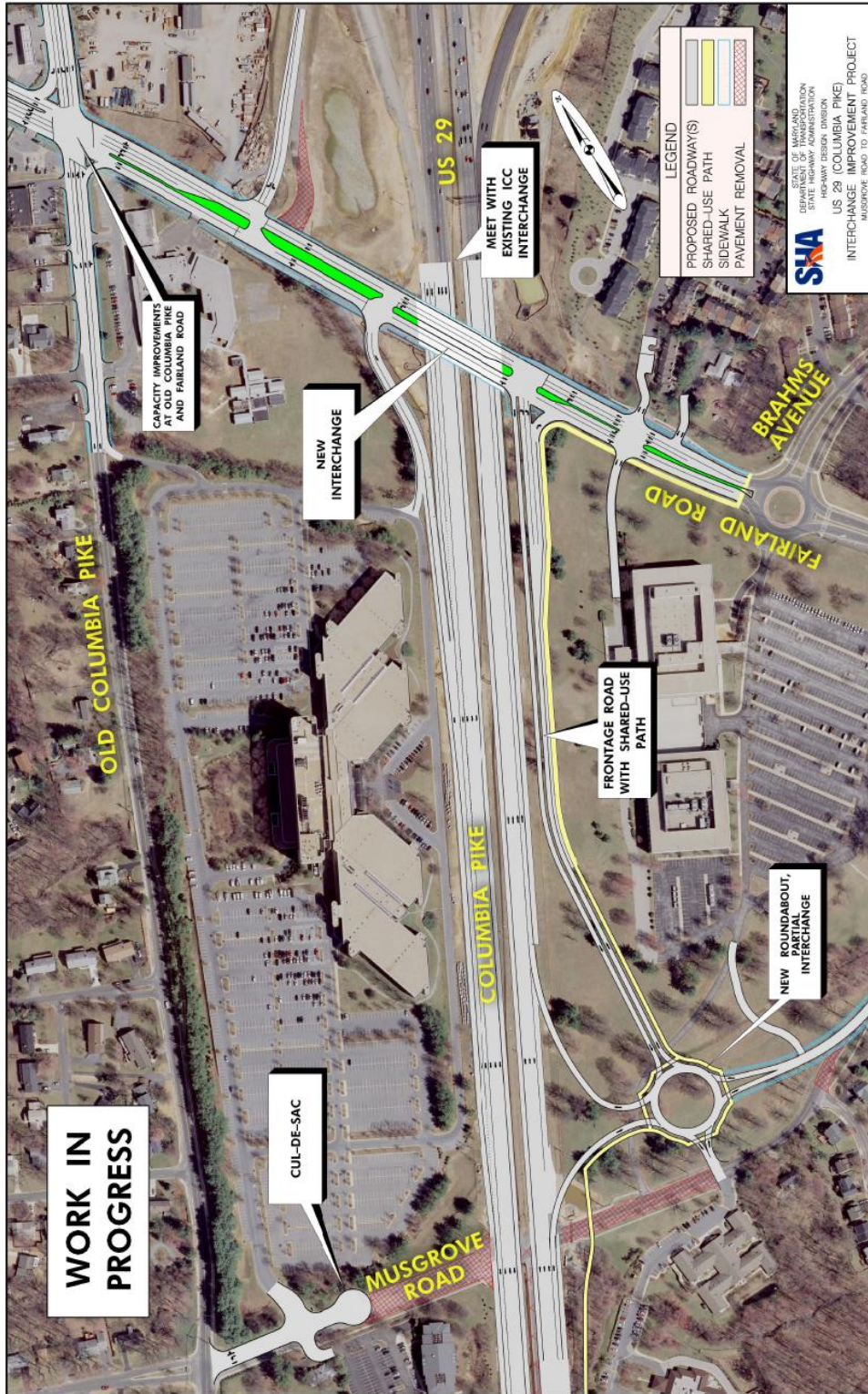
The overall rationale for the larger objective of converting US 29 into a grade-separated facility is to improve east-west travel and connectivity. Therefore, the proposed project's elimination of the Musgrove Road bridge over US 29 is a bit counterintuitive since it reduces connectivity and would require a more circuitous travel pattern.

Staff believes that the proposed ramps on the east side of US 29 could prove to be confusing to some users in that traffic from Fairland Road that is bound for US 29 north would have to travel a considerable distance south before heading in their intended direction (see Attachment No. 1). In addition, this ramp arrangement would require a large amount of new pavement compared to the alternative that included a Musgrove Road bridge over US 29 and ramps between Musgrove Road and northbound US 29. Staff believes that the project should include a Musgrove Road bridge over US 29 and a more straightforward travel pattern that maintains the existing roadway pattern.

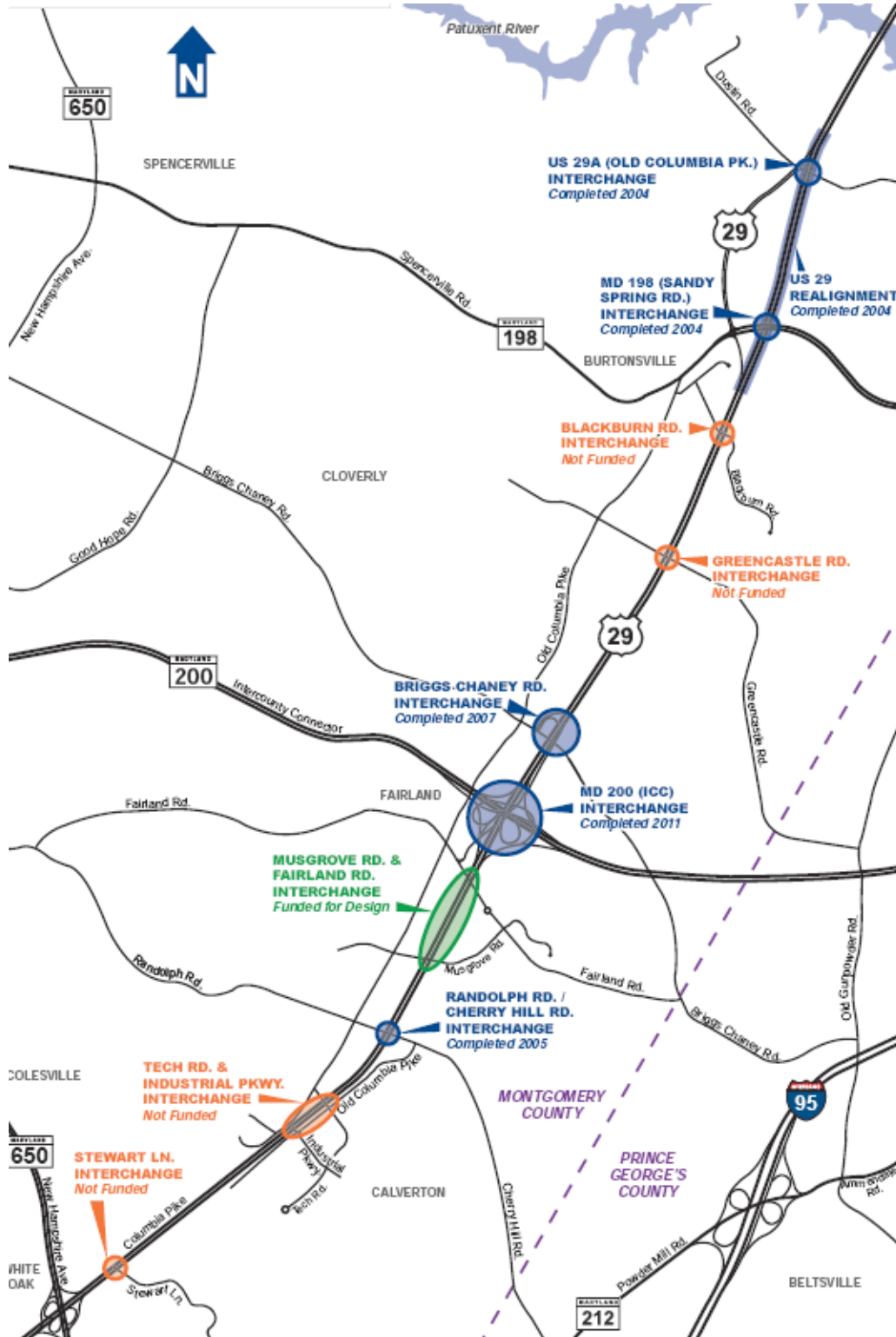
### **Attachments:**

1. Current SHA Interchange Design
2. Grade-Separated Interchanges Planned along US 29 from MD 650 to the Howard County Line
3. 1997 *Fairland Master Plan's* Street & Highway Plan

Attachment 1: Current SHA 15% Interchange Design



**Attachment 2: Grade-Separated Interchanges Planned along US 29  
from MD 650 to the Howard County Line**



**STREET & HIGHWAY PLAN**

FIGURE 38

