Ms. Irene Rico  
Division Administrator  
Federal Highway Administration  
400 North 8th Street, Suite 750  
Richmond, Virginia 23219-4825

SUBJECT: Revised Environmental Assessment  
US 460 Bypass Interchange and Southgate Drive Relocation  
State Project No. 0460-150-204, P101, R201, C501, B601; UPC 99425  
Town of Blacksburg

Dear Ms. Rico:

This letter and attachments constitute the Revised Environmental Assessment for the subject project, required pursuant to 23 CFR 771.119(g). Based on these documents, the Virginia Department of Transportation (VDOT) recommends and requests that the Federal Highway Administration (FHWA) issue a Finding of No Significant Impact (FONSI).

The Environmental Assessment (EA, Attachment 1) was prepared to study the environmental consequences for the replacement and relocation of the existing at-grade intersection of US 460 Bypass and Southgate Drive with a grade-separated interchange. Also included in the project is the relocation of a section of Southgate Drive to connect to the new interchange. The EA was approved by FHWA for public availability on April 4, 2013. The EA was distributed to affected units of federal, state, and local governments. Its availability for public review was advertised in local newspapers and the document was made available for public inspection on the project’s website (http://www.virginiadot.org/projects/salem/southgate_connector_-_blacksburg.asp); at VDOT’s Salem District Office, located at 731 Harrison Avenue in Salem; at VDOT’s Christiansburg Residency Office, located at 105 Cambria Street in Christiansburg; and at the Location Public Hearing, as detailed further below.

1. COMMONWEALTH TRANSPORTATION BOARD DECISION

The findings of the EA and a summary of the location public hearing were presented to the Commonwealth Transportation Board (CTB) at its June 19, 2013 workshop. The presentation included a description of the project history and the proposed project; a comparison of impacts between the No-Build and Build Alternatives; and a discussion regarding Huckleberry Trail, a
Section 4(f) property, and FHWA’s intent to make a de minimis finding with respect to the project’s involvement with the trail.

On July 17, 2013, the CTB passed a resolution by unanimous vote approving the location of the US 460 Bypass interchange and Southgate Drive relocation as presented at the May 8, 2013 Location Public Hearing and studied in the EA and rescinding the previous action taken by the CTB on January 17, 2002. Further, the CTB resolved that VDOT should continue to work with FHWA to finalize the study and secure federal approval of the new location.

2. SUMMARY OF LOCATION PUBLIC HEARING

A Location Public Hearing was held for the project to share the findings of the EA, to receive comments on and answer questions about those findings, and to receive recommendations for a decision. In addition, the public was notified of FHWA’s intent to make a de minimis finding with respect to the project’s Section 4(f) involvement with the Huckleberry Trail (as detailed in Section 5 of this Revised EA) and were asked to provide comments on the effects of the project on the activities, features, and attributes of the trail. Copies of the EA and supporting technical documents were available for review at the hearing. Displays and maps were presented to provide information on the project’s history, purpose and need, conceptual design features, and potential environmental impacts. Representatives of VDOT and its consultant were on hand to answer questions and discuss the project.

The public was notified of the public hearing via newspaper advertisements and the project website. The public hearing was held on Wednesday, May 8, 2013 in an open-house format, with no formal presentation, from 5 p.m. to 7 p.m. at The Inn at Virginia Tech and Skelton Conference Center in Blacksburg. Attendees received an informational brochure describing the proposed project and the environmental study, its purpose, and its findings. At the hearing, citizens were invited to provide their comments for inclusion in the formal hearing record by any of several methods within ten days of the public hearing (by May 18, 2013), including:

- A preprinted comment sheet, which was designed to elicit input on any issues or concerns regarding the EA. The comment sheet was provided to hearing attendees (and was available on the project website) and could be filled out and either deposited in a box at the hearing or mailed to the address preprinted on the sheet. In addition, any prepared written remarks could be deposited into the box at the hearing or mailed to VDOT’s project manager at the address provided.
- Attendees wishing to speak privately could submit comments orally at a recording station.
- Narrative letters or emails could be sent electronically to the designated addressee at VDOT.

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1 At its meeting on January 17, 2002, the CTB adopted a resolution approving the location of the Hubbard Country Club Southgate Connector, which included an interchange improvement at US 460 Bypass and Southgate Drive. The proposed location of the US 460 Bypass/Southgate Drive interchange is between approximately 0.3 and 0.4 miles south of the existing intersection and the previous location approval.
Sign-in sheets show that approximately 70 citizens attended the hearing. As signing-in was not mandatory, some people may have chosen not to sign the attendance log. A total of 15 comment sheets were submitted at the public hearing or during the comment period via mail. Additionally, 5 oral comments were recorded at the hearing, and 8 narrative comments (letters and emails) were collected by the close of the comment period. There were a total of 28 comment sheets and oral or written narrative comments.

3. COMMENTS ON THE EA AND ENVIRONMENTAL ISSUES

Comments received from the public were generally in favor of the replacement and relocation of the existing at-grade intersection of US 460 Bypass and Southgate Drive with a grade-separated interchange and the relocation of Southgate Drive to connect to the new interchange. Seven comments specifically expressed support for the project as a benefit to Virginia Tech, the Corporate Research Center, and the airport by providing safer and improved access from US 460 Bypass. Two comments expressed support for the improvements that would be made to Huckleberry Trail as part of the project, which would improve safety at the tunnel where the trail passes under US 460 Bypass. One comment stated that the proposed project would not improve the Huckleberry Trail. No additional information was provided to support that statement.

Comments with respect to the Huckleberry Trail related to maintenance of operation during construction and inclusion of design features to improve safety and utility (e.g., alignment, especially in relation to the airport property; trail width; grades into and out of the tunnel under US 460 Bypass; and alternatives to the current box culvert through which the trail passes under US 460 Bypass). Design-related comments and additional recommendations are being taken into account by VDOT during the design process, and comments that relate to relocation of portions of the trail resulting from the airport runway extension were sent to the Federal Aviation Administration (FAA) on June 5, 2013. A response from FAA has not been received to date. VDOT intends to incorporate appropriate measures into the design and construction of the project to minimize harm to the trail and to enhance the trail use experience. Additional information on the design of the Huckleberry Trail as it relates to this project is provided in Section 5 of this Revised EA.

Substantive comments on the EA and environmental issues that were received from citizens as part of the formal hearing transcript are summarized below and responses are provided herein. Substantive comments are those that raise issues that are relevant to the topics contained in the EA and that were not considered or discussed previously, or those that raise questions about the results of the analysis, whether it be the methodology used or the conclusions that have been drawn. Comments relating to the same topic have been grouped together as they may be addressed by a single response.

Comment: Preserve the Huckleberry Trail’s curvy, rural, natural appearance (the proposed relocation marked on the public meeting display boards and in the EA did not appear to do so, given the scale used).

Comment: The re-routing of the Huckleberry Trail as a consequence of both the airport runway expansion and the re-routing of Southgate Drive needs more thought. The currently planned re-
routing down 'Chicken Hill' [along Research Center Drive] is exceedingly dangerous for use by families on an outing with their children and is not ADA compliant. The best solution will be to route the Huckleberry along the fence enclosing the airport runway until it reaches the new route for Southgate Drive. Please coordinate with Virginia Tech to assure that this dangerous pathway is not constructed and a safe alternative is created.

**Comment:** The currently planned rerouting of the Huckleberry Trail would be better along the fence than along the proposed airport extension. That will minimize grade problems and interactions with traffic.

**Response:** This project affects a total of approximately 300-400 linear feet of trail at the existing underpass of US 460 Bypass. Geometric improvements in this portion would eliminate sharp curves and poor sight distance as well as reduce the approach grades to the underpass.

The runway extension project at the Virginia Tech-Montgomery Executive Airport, however, would require the relocation of portions of Research Center Drive and the Huckleberry Trail. These improvements are being planned and designed by the Virginia Tech-Montgomery Regional Airport Authority, in association with the Federal Aviation Administration and the Virginia Department of Aviation. The discussion that follows in this paragraph reflects planning by the Airport Authority at the time of this document preparation. Several alternative alignments are being considered for the relocation of Research Center Drive, and the existing section of Research Center Drive (to be renamed Spring Road) north of the extended runway would have no through traffic when it becomes a cul-de-sac just prior to the airport property line, which is approximately 1,500 south of Southgate Drive and outside of the environmental study corridor. The proposed realignment of the Huckleberry Trail was coordinated with Virginia Tech and the Town of Blacksburg. The trail as currently proposed would be rerouted around the northwest end of the relocated runway and would meander on an independent alignment at a variable distance from the relocated and existing sections of Southgate Drive. Design of the trail would follow the US Access Board’s Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way, Shared Use Paths, 36 CFR Part 1190; the American Association of State Highway and Transportation Officials’ (AASHTO) Guide for the Development of Bicycle Facilities, 2012, Fourth Edition; and VDOT’s Road Design Manual Appendix A. Design constraints would be mitigated to the extent feasible and, for sections steeper than the five percent maximum grade, wider pull offs and flatter landings are being considered.

**Comment:** On the top of page 3-8 of the EA, it states that the Huckleberry Trail was “expanded to 8 feet”. This is an error. The original asphalt was laid at 8 feet and the Blacksburg standard for such trails is 10 feet. This upgrade should be standard throughout the interchange project.

**Response:** Comment noted. As indicated in the response above, the proposed improvements to the Huckleberry Trail as part of this project are limited to geometric improvements associated with the underpass at US 460 Bypass. Nevertheless, all planned construction for proposed and relocated trail facilities will include a ten foot minimum path width as required by the VDOT Road Design Manual and as stated in the AASHTO Guide for the Development of Bicycle Facilities, 2012, Fourth Edition.
Comment: There are numerous safety issues surrounding the tunnel that the Huckleberry Trail traverses under US 460 Bypass including width, shy distance, fencing, signing, pavement marking, crash history, and horizontal and vertical clearances that should be addressed.

Response: All of the items above pertain to the design of the Huckleberry Trail where it crosses under US 460 Bypass and will be taken into consideration in the design phase of the project. Feasible opportunities to improve the approaches to the underpass crossing will be incorporated. Any reconstruction of the trail at this location would be compliant with all current design standards. Also see Section 5 for additional design information.

Comment: As part of Huckleberry Trail improvements, there should be a barrier to shield traffic noise.

Response: The space between the roadways and Huckleberry Trail will vary and the proposed alignment weaves around existing trees to create more of a greenway or park-like atmosphere. Additional landscaping may aid in reducing visual impacts as the trail nears the road.

As discussed in the EA and in this Revised EA in Section 5, based on the noise analyses, one noise barrier is considered feasible and reasonable at a location along the proposed route for relocated Huckleberry Trail, which, as currently proposed by the Virginia Tech-Montgomery Regional Airport Authority, would be within or near the study corridor. Details on the noise analysis can be found in the Preliminary Noise Analysis Technical Report, which is available for review on VDOT's project website. Note that this noise evaluation is preliminary and a more detailed review will be completed during the final design stage. As such, noise barriers that are found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis. Conversely, noise barriers that were not considered feasible and reasonable may be found to meet established criteria and be recommended for construction. The final design noise analysis will use specific, detailed design information and decisions on noise abatement to be provided will be made at that time.

Comment: A trail segment along the southwestern side of US 460 Bypass is being constructed right now (a connector between the two US 460 Bypass tunnels). The proposed interchange will very likely affect this newly upgraded trail, which doesn't seem like an efficient use of time or money.

Response: Comment noted. Plans for the trail project now under construction were developed prior to the Southgate project entering VDOT's Six Year Improvement Program (SYIP) and authorization being granted for preliminary engineering. Portions of the trail segment will need to be relocated as part of the Southgate project; however, it is anticipated that there would be little or no disruption to trail operations.

Comment: How was Huckleberry Trail allowed to go through Central Woods with all of the concerns about Stadium Woods?

Response: Huckleberry Trail does not go through Central Woods; the routing of the new trail segment was coordinated with Virginia Tech, Friends of the Huckleberry Trail, and the Town of Blacksburg and its construction is not a part of the US 460 Bypass project.
Comment: Provide temporary, safe crossings where Huckleberry Trail passes under US 460 during construction.

Comment: Minimize duration of construction of the Huckleberry Trail.

Response: As discussed in the Section 3.3 of the EA and in Section 5 of this Revised EA, the project would not permanently interrupt the continuity of the trail; any temporary suspensions of pedestrian and bicycle traffic on the trail would last no longer than necessary to complete construction and the land disturbed by the construction would be fully restored. Detours, temporary connections, or closures may be necessary for short durations (1-2 days) to complete tie-in construction. The goal during design continues to be maintaining trail access at all times.

Comment: Preserve the small, old wood forest that is located adjacent to the Huckleberry Trail.

Response: The project has been designed to avoid the isolated seven-acre patch of woods that is located adjacent to the study corridor within the Virginia Tech Dairy Complex. Impacts to the 43-acre forested area known as “Center Woods” located west of the study corridor have been minimized to the extent possible; approximately three acres are located within the study corridor. The Virginia Department of Forestry has indicated that these woods have low to medium conservation value. Coordination with Virginia Tech, including the Arboretum Committee, has been initiated to minimize impacts to wooded areas and large, high-value trees. Trees with a diameter at breast height (DBH) of 10-inches and greater within the study corridor were identified, assessed for health and condition, prioritized for retention, and catalogued. Further minimization of impacts will be examined during the design phase of the project.

Comment: Support the road from the interchange to Corporate Research Center following the old farm road to have least impact on stand of trees adjacent to Huckleberry Trail.

Response: This comment appears to be referring to one of the conceptual alternatives for the relocation of Research Center Drive that would be part of the airport expansion project. The Airport Authority, the Federal Aviation Administration, and the Virginia Department of Aviation are aware of the concerns regarding the referenced stand of trees and will take them into account in developing a final plan for the airport work and associated relocations of Research Center Drive and portions of the Huckleberry Trail.

Comment: Due to the close proximity to Smithfield Plantation and cemetery, concerned about items of historic significance being excavated and thrown away during construction.

Response: As discussed in the EA and in Section 5 of this Revised EA, extensive archeological survey within the Area of Potential Effects (APE) has occurred as a part of this EA, with field investigations occurring in July and August of 2012 and March of 2013. As a result of these evaluations, no sites that are listed on or potentially eligible for listing on the National Register of Historic Places (NRHP) would be affected. Notwithstanding, in the event that any artifacts are found during construction, the contractor would suspend work at the site of the discovery and follow the procedures outlined in VDOT’s 2007 Road and Bridge Specifications, Section 107.16 (d) - Environmental Stipulations, Archeological, Paleontological, and Rare Mineralogical Finding. Appropriate measures would be taken to assess their historic
significance and if required, to process and prepare them for curation in accordance with Virginia Department of Historic Resources (VDHR) curatorial standards.

**Comment:** Prefer that either a rotary/roundabout interchange be used or, barring that, a dogbone-style interchange (like a standard diamond interchange with roundabout-controlled intersections in place of traffic signals). Reasons cited include potentially lower cost, similar sightlines, fewer conflict points, fewer sustainability impacts, and that traffic signals would result in unnecessary delay and are not needed because the majority of the time, there is not enough traffic at the interchange to justify the need for them.

**Response:** An earlier planning study prepared by the Blacksburg-Christiansburg Metropolitan Planning Organization (MPO) formed the basis for the alternatives development and screening process for this study. Adopted by the MPO’s Policy Board in June 2011, the Analysis for a New Interchange on the US Route 460 Bypass in the Vicinity of Southgate Drive evaluated conceptual locations and configurations for an interchange of Southgate Drive with US 460 Bypass. As a result of that study, one Build Alternative was carried forward for detailed evaluation in the EA. This alternative represents a set of improvements that form a stand-alone solution to the identified needs within the study corridor. The Build Alternative is presented not as a specific engineering design, but, rather, as a study corridor that encompasses sufficient area to accommodate a variety of specific designs with respect to the US 460 Bypass / Southgate Drive interchange, the alignment for relocated Southgate Drive, removal of existing Southgate Drive, connections to existing roads, and other appurtenances, such as stormwater management facilities. Although several preliminary designs were tested in the June 2011 study, including rotary and roundabout diamond interchanges, those designs were not based on engineering surveys and do not represent actual final designs for elements of the project. Accordingly, final design of the interchange, while outside the scope of this environmental study, will be addressed during the design phase. Note that roundabouts are proposed for the Southgate Drive/Research Center Drive and the Southgate Drive/Duck Pond Drive intersections; it is VDOT’s policy to provide roundabout intersections if they are operationally and geometrically feasible.

**Comment:** Interchange should be north (east) of the present intersection as an extension of Washington Street.

**Response:** Extension of Washington Street to US 460 Bypass could affect the Smithfield Plantation, Stroubles Creek, and Virginia Tech’s current and planned land use. Virginia Tech and the MPO have plans to study a Western Perimeter Road in the near future. Virginia Tech’s 2009 Master Plan Land Use Amendment includes the extension of Washington Street to this perimeter road, and the southeastern end of the perimeter road would likely tie in to Southgate Drive.

**Comment:** Hope that the new interchange will advance the timeline for constructing a limited access parkway as an alternative to Prices Fork Road, i.e., “Southgate Parkway” or “Stroubles Creek Parkway.” Proposed interchange will open up Heath Farm for future VA Tech development, and the new parkway would also provide an alternative route to Merrimac Road and Warm Hearth Retirement Community, which now only has a circuitous back door entrance via congested Town of Blacksburg.
Response: A study for a connector road such as the one suggested by the commenter was completed by the MPO in April 2008. The study proposed several access connection points; however, the details of these access points would be developed if and when the project is funded. It is listed as a Tier 2 Vision Plan long-term project in the MPO’s 2035 Long Range Transportation Plan. As such, the ultimate timeline for such a project remains unknown.

Comment: 50% of the benefit could be achieved at 1-2% of the cost by providing two right-turn merge lanes (without stopping at the light) at the existing intersection location.

Response: Providing two free-flow right-turn lanes would still require westbound US 460 Bypass traffic to stop to allow left-turning traffic onto Southgate Drive. In addition, this improvement would not eliminate the need for a signalized intersection at this location.

As indicated in the response above, the alternatives development and screening process for improvements was based on a previous study (Analysis for a New Interchange on the US Route 460 Bypass in the Vicinity of Southgate Drive) that was adopted by the MPO. This study concluded that spot improvements, including transportation system management strategies, would have limited ability as stand-alone solutions because they would not address the primary basis for the study’s needs, which is the at-grade, signalized intersection, as discussed in the Purpose and Need section of the EA. Thus, spot improvements were not carried forward for detailed consideration in that study nor in the EA.

Comment: Construction of interchange and subsequent removal of signal at Southgate Drive will exacerbate high speeds and unsafe conditions at downstream US 460 Bypass/N. Main Street intersection (which currently already experiences many accidents). [One citizen that made this comment also questioned the following statement on the project website: “This new interchange will eliminate the last at-grade crossing on Route 460.” Response: The website is inaccurate; however, the EA does state that the Southgate intersection is one of only two at-grade intersections on the entirety of the bypass. Though not specifically named, the US 460 Bypass/N. Main Street intersection is the second one.]

Response: As indicated in the EA, one of the three primary needs of the study is to increase safety. The at-grade intersection at Southgate Drive (one of two along the 11-mile length of US 460 Bypass) was found to adversely impact safety due to:

- Variations of travel speeds.
- Queue lengths.
- Driver expectation.

These existing safety issues are supported by the fact that this intersection ranks sixth in the MPO region in terms of number of crashes.

The US 460 Bypass/N. Main Street (US 460 Business) intersection is the second at-grade intersection along the bypass, located 4.4 miles away from the current intersection and 4.8 miles from the proposed interchange. The new interchange at Southgate Drive is not anticipated to impact traffic operations at the US 460 Business interchange; in fact, it is projected to redistribute traffic in the area, which will result in fewer vehicles using the N. Main Street intersection.
The MPO’s financially constrained Year 2035 Long Range Transportation Plan (LRTP) contains two items relating to that intersection; one is for a study to identify specific safety issues and the other is to install safety and warning equipment. A short-term project (0460-150-S08, P101, M501; UPC 100663) involving the installation of rumble strips, flashing beacons, and warning signs at this location is included in VDOT’s current Six-Year Improvement Program (SYIP). The Town of Blacksburg has requested that a study be conducted in the near future for possible midterm improvements. Finally, the reconstruction of the intersection as an interchange is a Tier 2 Vision Plan long-term project in the MPO’s 2035 LRTP.

**Comment:** Bicycle accommodations through the proposed interchange are needed. Please coordinate with Virginia Tech to assure that the interchange that is built is useful and safe for all users.

**Response:** The design and operations of the US 460 Bypass, which is limited access and posted at 65 mph over most of its length, is not intended to accommodate pedestrian or bicycle users. The Huckleberry Trail, which is being improved geometrically as part of the project to improve utility and safety, is intended as a multi-use alternative for travel through the vicinity of the project.

**Comment:** Please provide the plan for traffic flow to/from Virginia Tech while construction of the US 460 Bypass is ongoing.

**Response:** Maintenance of traffic, sequence of construction, and transportation management plans would be developed during the design phase of the project. However, the construction of the proposed interchange at a new location (i.e., south of the existing at-grade intersection location) allows for the movement of traffic through the existing intersection during construction and is expected to facilitate construction relatively free of traffic conflicts (i.e., all existing movements would be maintained).

**Comment:** The planning processes for the airport expansion and this project should be linked so as not to waste the public’s time and resources.

**Response:** The Virginia Tech-Montgomery Executive Airport expansion and runway extension improvements are being planned and designed by the Virginia Tech-Montgomery Regional Airport Authority, in association with the Federal Aviation Administration and the Virginia Department of Aviation. VDOT has and will continue to coordinate with these agencies in the development of both the roadway and airport improvement projects.

During the comment period, a letter also was received from the Virginia Department of Conservation and Recreation’s (DCR) Division of Natural Heritage that provided general information on project features and procedures to follow if certain conditions are met under their jurisdiction. No further comments were received from any other federal or state agencies or local government representatives or organizations.
4. CHANGES IN PROPOSED ACTION AND MITIGATION MEASURES RESULTING FROM COMMENTS RECEIVED ON THE EA AS A RESULT OF THE PUBLIC HEARING OR OTHER FACTORS

No changes have been made at this time to the proposed action and mitigation measures as a result of comments received on the EA or as a result of the public hearing held for this project.

5. FINDINGS, AGREEMENTS, AND DETERMINATIONS

No Effect on Historic Properties. Pursuant to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations at 36 CFR 800, effects on historic properties have been taken into account during development of the project. VDOT reviewed previous studies and completed new surveys to identify historic properties within the Area of Potential Effects (APE) for the subject project. There are two architectural historic properties within the study’s architectural APE:

- Smithfield (VDHR #150-5017), a late 18th century dwelling listed November 12, 1969 on the NRHP.
- The Preston Family Cemetery (VDHR #150-5070), which is potentially eligible for the NRHP; however, additional data would be needed to make a definitive determination.

The Virginia Department of Historic Resources (VDHR) concurred on March 27, 2013 that the project as currently proposed would have no effect on the two properties listed above.

Archaeological resources within the APE were assessed by researching VDHR site file maps and records as well as historic map projections and by conducting extensive archeological survey, with field investigations occurring in July and August of 2012 and March of 2013. As a result of these evaluations, one previously recorded archaeological site (44MY0042) was found to be located within or immediately adjacent to the archaeological APE. Features identified at Site 44MY0042 include postholes and the base of a fire box, heat shaft, and chimney for an updraft kiln interpreted as the archaeological remnant of a pottery kiln. The site is associated with the Smithfield Plantation (VDHR #150-5017) and was recommended eligible for listing on the NRHP following the completion of Phase II investigations in 1998. Proposed construction activities in the vicinity of the site would be limited to only removal of the existing pavement and restoration of the right-of-way. Removal and restoration activities during construction would not extend beyond the double row of trees between the roadway and the archeological site and these trees would remain in place as a vegetative buffer. As an additional measure to ensure that the site is not impacted during construction activities, VDOT would erect orange safety fencing along the portion of the southern boundary of Site 44MY0042 that is located within VDOT right-of-way (see aerial photo in Attachment 2). In view of these provisions, VDOT recommended that the proposed project will have no effect on Site 44MY0042, and VDHR concurred on August 13, 2013.

Wetland Finding. Based upon the assessment of wetland impacts, it has been determined, in accordance with Executive Order 11990, Protection of Wetlands, that there is no practicable alternative to the proposed construction in wetlands and that the proposed action would include
all practicable measures to minimize harm to wetlands that may result from such use when they can be developed at the appropriate stage of project development. Approximately 1 acre of wetlands lie within the study corridor, which encompasses approximately 0.85 miles along US 460 Bypass and approximately 0.8 miles along Southgate Drive, as well as areas on new location for the proposed interchange and relocation of Southgate Drive. Where practicable, wetland areas have been avoided. Impacts would include filling of wetlands for construction of roadbed. Design measures to minimize such impacts will be developed during the design phase and may include features such as retaining walls to reduce the extent of fills. Compensation for unavoidable wetland impacts from the project would follow the US Army Corps of Engineers' (USACOE) Final Compensatory Mitigation Rule, which standardizes mitigation nationally. This compensation follows a hierarchy of preferred mitigation approaches that include: 1) mitigation banks; 2) in-lieu fees; and 3) permittee-responsible mitigation. Compensation for impacts would be provided as part of the permit conditions for any authorizations issued by the USACOE and Virginia Department of Environmental Quality (VDEQ). Because these agencies determine the compensation requirements for impacts on a case-by-case basis, the quantitative requirements for the project would be negotiated with them as part of the permit application process. Compensation may involve enhancement or restoration of existing wetlands, wetland creation onsite or offsite, use of credits from an approved wetlands mitigation bank, or payments to the Virginia Wetlands Restoration Trust Fund.

**Floodplains.** Floodplain impacts have been assessed in accordance with Executive Order 11988, *Floodplain Management*. According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, the proposed project would cross no streams with designated 100-year floodplains (i.e., there are zero acres of floodplains within the study corridor). Therefore, the project would not appreciably increase, directly or indirectly, flood levels or the risks of flooding, and no substantial effects on natural or beneficial floodplain values are expected to result from the proposed project. Consequently, no formal floodplain finding is necessary.

**Section 4(f) De Minimis Finding for Use of Huckleberry Trail.** Approximately 2,750 linear feet, or 3.8 acres, of the Huckleberry Trail lie within the study corridor, approximately two thirds of which parallels the west side of US 460 Bypass (1,833 linear feet). The proposed project would temporarily impact only approximately 0.5 acres of that land. Within the study corridor, the trail is located on easements through land that is owned by Virginia Tech and the Virginia Department of Transportation, though the trail is maintained by the Town of Blacksburg. The trail shares an underpass of US 460 Bypass with a farm road utilized by Virginia Tech in the operation of its dairy science complex. The Build Alternative would include improvements to the horizontal alignment at the approaches to the underpass (to eliminate the sharp curves and poor sight distance) and reduction of the grades on the trail’s approaches to the underpass, which would enhance safety and comfort for users of the trail (additional information on trail design is provided in the next section).

Section 4(f) of the US Department of Transportation Act of 1966, as amended, pertains to uses of land from public parks and recreation areas, including recreational trails. Section 6009 of SAFETEA-LU provides that Section 4(f) requirements are satisfied if it is determined that the proposed project would have a *de minimis* impact on the Section 4(f) property. VDOT
recommends and requests that FHWA make a *de minimis* finding with respect to the project’s involvement with the Huckleberry Trail based on the following: 1) The project would not permanently interrupt the continuity of the trail; 2) Temporary suspensions of pedestrian and bicycle traffic on the trail would last no longer than necessary to complete the construction; and 3) The land disturbed by construction would be fully restored.

The public was given the opportunity at the May 8, 2013 Location Public Hearing to review and comment on the proposed project and the proposed *de minimis* impact finding. As indicated in Section 3 of this Revised EA, comments received from the public were generally in favor of the project and the proposed improvements at the Huckleberry Trail crossing; comments with respect to the trail primarily focused on to maintenance of operation during construction and design features to improve safety and utility (see next section for additional information on the latter).

Following the opportunity for public comment, officials with jurisdiction over the trail (Virginia Tech; Montgomery County; Town of Blacksburg; Town of Christiansburg; and the Friends of the Huckleberry) were also asked to concur with the *de minimis* finding in correspondence dated June 3, 2013. Responses were received from all five officials in support of the US 460 Bypass/Southgate Drive interchange and concurring that the project would not adversely affect the activities, features, and attributes of Huckleberry Trail (see Attachment 3). Montgomery County, the Town of Blacksburg, and Friends of the Huckleberry stipulated the following conditions in conjunction with their *de minimis* concurrence:

1. Access to the trail must be maintained throughout construction as it is a significant recreational amenity and commuting route. It is understood that detours may be necessary at times to assure safety, and the Town is agreeable to safe, equivalent, and well-planned and marked detours during construction.

2. No at-grade road crossings should result from the construction of this project. The Huckleberry Trail should pass over or under any roadway construction.

3. Any segment of trail disturbed or relocated as part of this project should be restored to current standards, which include a paved width of 10 feet.

4. Where the trail will be relocated near a roadway, the trail should be constructed with gradual sweeping curves, landscaping, and varying in grade and distance from the nearby road, so that it continues to provide a greenway rather than asphalt sidewalk experience for the recreational users.

The Town of Blacksburg and the Friends of the Huckleberry enumerated two additional conditions:

1. The entrance and exit alignment and grade into the tunnel under US 460 Bypass at the interchange should be restored in an improved condition to allow for safety and visibility of the trail users.

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2 Only one of the 28 comments received during the public hearing comment period stated that the proposed project will not improve the Huckleberry Trail. No additional information was provided to support that statement.
2. The space allocation in the existing tunnel between the trail and farm vehicles should be reevaluated based upon the actual size and frequency of farm vehicles that will use this crossing following the interchange construction.

**Huckleberry Trail Design.** Many comments were submitted during the public hearing comment period relating to design and safety issues at the tunnel where the Huckleberry Trail crosses under US 460 Bypass. The primary concern cited was the horizontal and vertical curvature approaching the underpass. Other topics included trail width, shy distance, crash history, and alternatives to the current box culvert through which the trail passes. All of these items will be taken into consideration in the design phase of the project. Some key features regarding the design of the trail as they relate to this project are summarized below:

- This project would improve the sight distance at the approaches to the tunnel by straightening the alignment and flattening the grade. The horizontal approach geometry and grades leading into and out of the tunnel would be designed to meet Americans with Disability Act (ADA) and American Association of State and Highway Transportation Officials (AASHTO) requirements. More specifically, design of the trail would follow the US Access Board’s *Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way, Shared Use Paths*, 36 CFR Part 1190; AASHTO’s *Guide for the Development of Bicycle Facilities*, 2012, Fourth Edition; and VDOT’s *Road Design Manual* Appendix A. It is noted that physical and environmental constraints would be mitigated to the extent feasible.

- All planned construction for proposed and relocated trail facilities will include a ten foot minimum path width as required by the VDOT *Road Design Manual* and as stated in AASHTO’s *Guide for the Development of Bicycle Facilities*, 2012, Fourth Edition.

- The 14.5-foot minimum vertical clearance in the tunnel will be maintained. Replacing the tunnel with a larger tunnel or overhead bridge was found to be cost prohibitive. An overpass would require a minimum 17.5-foot vertical clearance over US 460 Bypass and long approaches to meet grade requirements.

- The original tunnel through which the trail passes was constructed to meet Virginia Tech’s access needs. The allocation of the fixed 24-foot width in the new tunnel will be assessed with Virginia Tech since large farm vehicles currently and will continue to use the tunnel; as land use changes, vehicular access may diminish or no longer be needed. Pavement in the tunnel will be evaluated as part of this project to provide a smooth surface and for dust control.

- As the tunnel serves as a shared area between trail users and a potential mix of large equipment, some type of physical barrier will be provided for safety reasons to separate mixed uses as long as this condition persists. The only alternative to adding barriers that cause the cyclists to dismount on either side of the tunnel might be to move the trail on the southwest side of the tunnel further to the southwest so that the curve is softened. The southwest approach suggestion is under further review as a result of VDOT’s value engineering study.
Noise. Pursuant to 23 CFR 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise, as amended and updated in July 2010, and VDOT’s Highway Traffic Noise Impact Analysis Guidance Manual, VDOT has investigated noise impacts and considered noise abatement measures. The noise analysis prepared for this project indicates that design year (2040) build noise levels are predicted to exceed the noise abatement criteria (NAC) at a portion of a trail proposed by Virginia Tech along Duck Pond Drive and would approach or exceed the NAC or substantially increase (10 dBA or more) over existing noise levels at various points along the proposed location of a section of the Huckleberry Trail that would be relocated as part of the airport runway extension planned by the Virginia Tech-Montgomery Regional Airport Authority. Preliminary noise abatement measures (e.g., noise barriers) were determined not to be feasible and reasonable at the Duck Pond Drive proposed trail location because a 5-dBA or greater reduction in noise level cannot be achieved at that location. One noise barrier was determined to satisfy VDOT’s feasible and reasonable criteria at a location along the proposed route for relocated Huckleberry Trail, which, as currently proposed by the Virginia Tech-Montgomery Regional Airport Authority, would be within or near the study corridor. Although noise barriers were evaluated in this study in an attempt to reduce design year build noise levels below the NAC, earth berms may still a viable abatement option for this project and may be considered during the final design process. Additionally, design variations may help achieve reduced noise levels at the trail locations and will be considered during final design. The conclusions derived from the noise analysis are preliminary because all modeling was based on conceptual design and topographic information. Additional, detailed analyses are to be conducted during the final design phase of the project, and firm determinations on noise abatement will be made at that time.

Air Quality. The project lies in an area that is currently in attainment with all of the National Ambient Air Quality Standards (NAAQS). As such, regional air quality conformity requirements do not apply. The project does not include or directly affect any roadway whose design year average daily traffic volume, skew angle, or level of service would exceed the threshold criteria specified in the Agreement between the Federal Highway Administration and the Virginia Department of Transportation (February 27, 2009) for streamlining the project-level air quality analysis process for carbon monoxide (CO) (this agreement looked at the worst-case scenario for projects with an Average Daily Traffic (ADT) of up to 59,000 vehicles and found that using worst-case modeling assumptions, there would be no violations of the NAAQS for CO). A project-level CO analysis, therefore, has not been prepared for the study project as it would meet all applicable air quality analysis requirements. The project was evaluated for fine particulate matter impacts and was found not to be a project of air quality concern. In addition, the project would generate minimal air quality impacts for Clean Air Act Amendments (CAAA) criteria pollutants and has not been linked with any special MSAT concerns. Design year traffic is projected to be less than the 140,000 to 150,000 annual average daily traffic (AADT) thresholds identified in FHWA’s guidance and as such, the project area is best characterized as a project with “low potential MSAT effects”. The temporary air quality impacts from construction are not expected to be significant. Construction activities are to be performed in accordance with VDOT’s current Road and Bridge Specifications. Therefore, the project is not expected to cause
or contribute to any violations of the NAAQS, worsen any existing violations, or interfere with the attainment of any applicable NAAQS.

No other changes have been made since approval of the EA, and VDOT believes there are no further findings, agreements, or determinations required for this project.

The Virginia Department of Transportation requests that you make a FONSI determination and forward a signed original for use in reproducing the necessary copies for distribution. If you have any questions or need any further information, please contact Patrick Hughes at (804) 371-6839 or by email at Patrick.Hughes@VDOT.Virginia.gov.

Sincerely,

[Signature]

Stephen J. Long
State Environmental Administrator

ATTACHMENTS:

1. Environmental Assessment
2. Proposed Fencing Around Site 44MY0042 During Construction
3. De Minimis Letters Regarding Huckleberry Trail
ATTACHMENT 1

ENVIRONMENTAL ASSESSMENT
ATTACHMENT 2

PROPOSED FENCING AROUND SITE 44MY0042
DURING CONSTRUCTION
ATTACHMENT 3

DE MINIMIS LETTERS
REGARDING HUCKLEBERRY TRAIL
July 11, 2013

Patrick Hughes, Project Manager
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219-2000

RE: Environmental Assessment for US 460 Bypass Interchange and
Southgate Drive Relocation
STATE PROJECT NO.: 0460-150-204, P101, R201, C501, B601; UPC 99425
COUNTY OF MONTGOMERY: Huckleberry Trail

Dear Mr. Hughes:

In response to your letter of June 3, 2013 requesting the County concur that the proposed Southgate Interchange project will have a de minimus impact on the Huckleberry Trail, we appreciate the opportunity to comment on this issue. The Huckleberry Trail is a significant recreational amenity for the Towns of Blacksburg and Christiansburg, as well as the County, and serves as a commuting corridor for bicyclists between Blacksburg to Christiansburg.

Considering citizen comments and our concern for the safety of our citizens using the trail, we can agree that the Southgate Interchange and associated roadway construction will have a de minimus impact on the Huckleberry Trail provided the following conditions occur:

1. Access to the trail must be maintained throughout construction. The trail is a significant recreational amenity and commuting route. Its use cannot be suspended for a two year highway construction duration. We understand that detours may be necessary at times to assure safety, and are agreeable to safe, equivalent, and well planned and marked detours during construction.

2. No at grade road crossing should result from the construction of this project. The Huckleberry Trail should pass over or under any roadway construction. This provision was also included in the MPO actions supporting the Southgate Interchange project.

3. Any segment of trail disturbed or relocated as part of this project should be restored to current standards, which include a paved width of 10 feet.

4. Where the trail will be relocated near a roadway, the trail should be constructed with gradual sweeping curves, landscaping, and varying in grade and distance from the nearby road, so that it continues to provide a greenway rather than asphalt sidewalk experience for the recreational users.
We appreciate the opportunity to provide comments on this project. Provided the conditions listed above are met, we concur the Southgate Interchange construction will have a de minimus impact on the Huckleberry Trail. Please feel free to contact me at meadowsfc@montgomerycountyva.gov or (540) 382-6954 if you need any additional information.

Sincerely,

F. Craig Meadows
County Administrator
June 18, 2013

Virginia Department of Transportation
Patrick Hughes, Project Manager
1401 East Broad Street
Richmond, VA 23219-2000

RE: Environmental Assessment for US 460 Bypass Interchange and Southgate Drive Relocation
State Project No. 0460-150-204, P101, R201, C501, B601; UPC99425
Town of Blacksburg – HUCKLEBERRY TRAIL

Dear Mr. Hughes,

This is in response to your request for Town concurrence that the proposed Southgate Interchange project will have a de minimus impact on the Huckleberry Trail. We appreciate the opportunity to review this finding. As you are aware, the Huckleberry Trail is a significant recreational amenity within the Town and provides a major commuting corridor for bicyclists to and through Campus. The Town does support the construction of the Southgate Interchange, and recognizes that some adjustments to the trail will be necessary to accomplish the Interchange construction.

Therefore, following our detailed review of the plans to date, and consideration of the comments of our community, we agree that the Southgate Interchange and associated roadway construction will have a de minimus impact on the Huckleberry Trail under the following conditions:

1) Access to the trail must be maintained throughout construction. This is a significant recreational amenity and commuting route. Its use cannot be suspended for a two year highway construction duration. We understand that detours may be necessary at times to assure safety, and are agreeable to the safe, equivalent, and well planned and marked detours during construction.

2) No at grade road crossings should result from the construction of this project. The Huckleberry Trail should pass over or under any roadway construction. This provision was also included in the MPO actions supporting the Southgate Interchange project.

3) The entrance and exit alignment and grade into the tunnel under 460 at the interchange will be disrupted during construction and should be restored in an improved condition to allow for safety and visibility of the trail users. Many comments were received by VDOT and the Town on this topic during the environmental public hearing period.

4) The space allocation in the existing tunnel between the trail and the farm vehicles should be re-evaluated based upon the actual size and frequency of farm vehicles which will use this crossing following the interchange construction. Many or most of the largest vehicles may be able to use the Plantation Drive tunnel which is significantly larger with better approaches and can more safely serve both transportation needs.

5) Any segment of trail disturbed or relocated as part of this project should be restored to current standards, which include a paved width of 10 feet.

6) Where the trail will be relocated near a roadway, the trail should be constructed with gradual sweeping curves, landscaping, and varying in grade and distance from the nearby road, so that it continues to provide a greenway rather than asphalt sidewalk experience for the recreational users.
We appreciate the opportunity to provide input on this important project. With the above provisions met, we agree the Southgate Interchange construction will have a *de minimus* impact on the Huckleberry Trail. Please let me know if we can be of further assistance.

Sincerely yours,

Marc Verniel
Town Manager
June 21, 2013

Patrick Hughes
Project Manager
VDOT – Environmental Division
1401 East Broad Street
Richmond, Virginia 23219-2000

SUBJECT: Environmental Assessment for US 460 Bypass Interchange and Southgate Drive Relocation
State Project No.: 0460-150-204, P101, R201, C501, B601; UPC No. 99425
Town of Blacksburg
Huckleberry Trail

Dear Mr. Hughes,

Thank you for the opportunity to provide input for this important project per your letter to President Charles W. Steger dated June 3, 2013. Virginia Tech has been working closely with the Virginia Department of Transportation Salem District, Town of Blacksburg, the local Metropolitan Planning Authority and many other stakeholders as this project has developed. The university is excited about the project and appreciates all the hard work that has been done.

Virginia Tech concurs that the project would not adversely affect the activities, features, and attributes that qualify the Huckleberry Trail for protection under Section 4(f) of the Department of Transportation Act of 1966, as amended.

If you have questions or need more information please feel free to contact Mike Dunn mikedunn@vt.edu or phone 540-231-7641.

Sincerely,

Sherwood G. Wilson, Ph.D.
Vice President for Administration

/vc

c: Charles W. Steger
Jason Soileau
Mike Dunn

Invent the Future

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
An equal opportunity, affirmative action institution
From: Bill Ellenbogen [mailto:bill@billellenbogen.com]
Sent: Friday, July 19, 2013 1:29 PM
To: Hughes, Patrick M. (VDOT)
Cc: dcrane@blacksburg.gov; gulbenkiang@gmail.com; lance@vt.edu; Walt Pirie; Steve Sandy;
ryoungs@vt.edu; Mitchell B. Haugh
Subject: Route 460 Bypass and Southgate Drive Relocation, June 3rd [de minimis] Letter

Patrick:

Friends of the Huckleberry, Inc received the attached letter from the Town of Blacksburg. It was a draft prepared by the Blacksburg Town Manager that was shared with us and we are under the impression that it was sent to VDOT as a response regarding the impact of the Route 460 Bypass and Southgate Drive Relocation on the Huckleberry Trail. We share the Town of Blacksburg’s viewpoint on the project and if the conditions in the letter are met, we are in concurrence with proceeding forward with the road project.

I am sorry for the delay in responding to your inquiry and thank you for the follow-up e-mail. If you require additional clarification, please let me know.

Bill Ellenbogen, President
Friends of the Huckleberry, Inc.
PO Box 925
Blacksburg, VA 24063

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At 03:36 PM 7/18/2013, Hughes, Patrick M. (VDOT) wrote:

Good afternoon Bill,

Last month we sent a letter with regards to the Route 460 Bypass and Southgate Drive Relocation project as pertains to the Huckleberry Trail. Specifically, the letter addresses a de minimis impact determination and asks for your concurrence that the project will not adversely affect the Trail, for the reasons mentioned in the letter.

I wanted to follow up and make sure the letter has been received, and if so, to find out if you have any questions and if you will be responding?

Please let me know of any questions or need for additional information.

Thank you very much,

Pat

Patrick Hughes
Location Study Project Manager
Virginia Department of Transportation
Environmental Division
1401 East Broad Street
Richmond, Virginia 23219  
Voice: (804) 371-6839  
Cell: (804) 357-7364  
Fax: (804) 786-7401  
Patrick.Hughes@VDOT.Virginia.gov

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Bill Ellenbogen, President  
Friends of the Huckleberry, Inc.  
PO Box 925  
Blacksburg, VA 24063  

Cell: 540-449-2000
From: Barry Helms [mailto:bhelms@christiansburg.org]
Sent: Monday, July 22, 2013 2:47 PM
To: Hughes, Patrick M. (VDOT)
Subject: RE: Follow-up on June 3rd [de minimis] Letter

Good afternoon,

The project will not adversely affect any sections of the Huckleberry Trail that directly affects town residents.

Barry Hems

From: Hughes, Patrick M. (VDOT) [mailto:Patrick.Hughes@VDOT.Virginia.gov]
Sent: Monday, July 22, 2013 10:28 AM
To: Barry Helms
Subject: FW: Follow-up on June 3rd [de minimis] Letter

Good morning Barry,

We reference to the below email chain, I wanted to follow up on our June 3rd Huckleberry Trail de minimis letter so as to make sure the letter has been received and to find out if the Town will be responding. Please let me know of any questions or need for additional information.

Thank you very much,

Pat

Pat Hughes | Project Manager
VDOT - Environmental Division
Office: (804) 371-6839 | Cell: (804) 357-7364

From: Richard Ballengee [mailto:rballengee@christiansburg.org]
Sent: Friday, July 19, 2013 9:09 AM
To: Hughes, Patrick M. (VDOT)
Subject: RE: Follow-up on June 3rd [de minimis] Letter

Pat, I have forwarded your email relating to the 460 Bypass and Southgate Drive relocation as pertains to the Huckleberry Trail to our Town Manager and Engineering Dept. Thanks. RBallengee

From: Hughes, Patrick M. (VDOT) [mailto:Patrick.Hughes@VDOT.Virginia.gov]
Sent: Thursday, July 18, 2013 3:48 PM
To: Richard Ballengee
Subject: Follow-up on June 3rd [de minimis] Letter

Good afternoon Mayor Ballengee,

Last month we sent a letter with regards to the Route 460 Bypass and Southgate Drive Relocation
project as pertains to the Huckleberry Trail. Specifically, the letter addresses a *de minimis* impact determination and asks for concurrence that the project will not adversely affect the Trail, for the reasons mentioned in the letter.

I wanted to follow up and make sure the letter has been received, and if so, to find out if there are any questions and if the Town will be responding?

Please let me know of any questions or need for additional information. Thank you very much.

Respectfully,

Pat

Patrick Hughes  
Location Study Project Manager  
Virginia Department of Transportation  
Environmental Division  
1401 East Broad Street  
Richmond, Virginia 23219  
Voice: (804) 371-6839  
Cell: (804) 357-7364  
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Patrick.Hughes@VDOT.Virginia.gov  
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