

**FEDERAL HIGHWAY ADMINISTRATION**

**FINDING OF NO SIGNIFICANT IMPACT**

**FOR**

**ROUTE:** Bridgewater Bypass

**LOCATION:** Rockingham County and Town of  
Bridgewater, Virginia

**FEDERAL PROJECT:** STP-5176(002)

**STATE PROJECT:** 0257-176-101, PE-101 (ID 17541)

The Federal Highway Administration has determined that Candidate Build Alternative A will have no significant impact on the environment. This Finding of No Significant Impact is based on the Revised Environmental Assessment which has been independently evaluated by the Federal Highway Administration and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required.

In addition, in accordance with 23 CFR 774, the Federal Highway Administration hereby makes a Section 4(f) finding of de minimis impact for the Mary Miller House.

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Date

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FHWA Division Administrator

**Rationale for the Finding of No Significant Impact**  
Bridgewater Bypass  
State Project Number 0257-176-101, PE-101 (ID 17541)

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I have reviewed the Virginia Department of Transportation's September 22, 2009 letter requesting a Finding of No Significant Impact (FONSI), the Revised Environmental Assessment, comments received on the Environmental Assessment and as part of the public involvement process as well as responses to those comments, and other project documentation.

Prior to the finalization of the Revised Environmental Assessment, I reviewed that document and provided comments. All of my comments have been addressed. The Revised Environmental Assessment is attached to this FONSI and is hereby incorporated by reference into this rationale supporting the FONSI.

**Environmental Impacts**

The Environmental Assessment was transmitted to numerous federal and state environmental resource agencies and was made available for public review prior to and at the Public Hearing. No comments were received from any agency or any member of the public that suggested that the project would have a significant environmental impact. The following discussion summarizes the environmental impacts from Candidate Build Alternative A as identified in the Revised Environmental Assessment.

Candidate Build Alternative A (CBA A) would have no impacts on the following resources: federally threatened and endangered species, parks and recreation facilities, wildlife and waterfowl refuges, anadromous fish, trout waters, scenic byways, wild and scenic rivers, open space easements, federal properties, public water supplies, sole source aquifers, and environmental justice populations. In addition, CBA A would not result in an exceedance of the National Ambient Air Quality Standard for any pollutant.

**Land Use, Socioeconomics, and Right-of-Way and Relocations**

Agriculture dominates land use in most of the area traversed by CBA A. However, Rockingham County's Comprehensive Plan designates most of the land within the study area for residential and commercial uses, and the Town of Bridgewater's Comprehensive Plan indicates residential, commercial, and industrial land uses along a proposed bypass corridor. In addition, Rockingham County and the Town of Bridgewater both passed resolutions supporting CBA A during this study.

Candidate Build Alternative A was located to avoid splitting communities and residential subdivisions, and no communities or subdivisions would be isolated. The project would likely require approximately three residential relocations. Two businesses – a car wash and mini-warehouse storage facility – may also be impacted, but it is probable that these

businesses can be avoided during final design of the project. One farm would be displaced; three other farms would be crossed by CBA A, but none of the structures on the farms would be displaced. The Bridgewater Volunteer Rescue Squad is near CBA A but it is unlikely that it would need to be displaced. Upon initiation of the right-of-way acquisition, the Virginia Department of Transportation (VDOT) will develop a detailed relocation plan to ensure that orderly relocation of all displacees can be accomplished in a satisfactory manner. The acquisition of right-of-way and the relocation of displacees will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended. Assurance is given that relocation resources would be available to all residential, business, farm, and nonprofit displacees without discrimination.

Based on current real estate multiple listings services (MLS), there appears to be adequate housing and business replacement sites in the Harrisonburg/Rockingham/Bridgewater area. VDOT has the ability and, if necessary, is willing to provide housing of last resort including: the purchase of land or dwellings; repair of existing dwellings to meet decent, safe, and sanitary conditions; relocation or remodeling of dwellings purchased by VDOT; and construction of new dwellings. Assurance is given that all displaced individuals would be relocated to suitable replacement housing, and that all replacement housing would be fair housing available to all persons without regard to race, color, religion, sex, or national origin and would be within the financial means of the displacees. Each person would be given sufficient time to negotiate for and obtain possession of replacement housing. No residential occupants would be required to move from property needed for the project until comparable decent, safe, and sanitary replacement dwellings have been made available to them.

FHWA finds that the land use and socioeconomic impacts are not significant.

### Farmland

*Context.* Rockingham County's Comprehensive Plan indicates that the County plans to maintain "its rural agricultural nature by directing new development to areas in or near existing towns and communities served by public water and sewer, and by curtailing development in rural areas." Accordingly, the County has designated Urban Growth Areas in and around the incorporated towns and adjacent to major road corridors. Bridgewater and portions of the county between Bridgewater and Harrisonburg are contained within the designated Urban Growth Area around the City of Harrisonburg. The Plan states that the area to absorb the largest amount of growth is south and east of Harrisonburg (including Bridgewater). The plan specifically mentions that the area between Harrisonburg and Bridgewater, Dayton, and Mount Crawford "is expected to absorb a significant amount of the future development and population growth of the county during the next several decades."

*Farmland Protection Policy Act.* Under the federal Farmland Protection Policy Act (FPPA), the U.S. Department of Agriculture defines “farmland” as:

- Prime farmland – land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses.
- Unique farmland – land other than prime farmland that is used for production of specific high-value food and fiber crops.
- Farmland other than prime or unique farmland that is of statewide importance for the production of food, feed, fiber, forage, or oilseed crops.

According to the Natural Resources Conservation Service’s District Conservationist, there are approximately 255,241 acres of farmable land in Rockingham County, of which approximately 165,525 acres meet the definition of “farmland” under the FPPA.

*Intensity.* Candidate Build Alternative A would convert less than 0.04% of the farmland in Rockingham County to highway use, and the affected farmland is not unique as there is similar farmland nearby and throughout the county. In accordance with the FPPA, Form CPA-106 was completed in cooperation with the Natural Resources Conservation Service. The Revised Environmental Assessment contains a detailed description of the procedures for completing the form. In accordance with the regulations implementing the FPPA at 7 CFR Part 658, corridors receiving a total score less than 160 need not be given further consideration for protection. The total score for CBA A was less than 160. Therefore, no further consideration is required under the FPPA for farmland protection measures or other alternatives that might reduce farmland conversion.

FHWA finds that the farmland impacts are not significant.

### Historic Properties

The impacts to historic properties were assessed in accordance with Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations at 36 CFR Part 800. Historic properties are archaeological sites and historic buildings, structures, objects, and districts that are listed in, or eligible for listing in, the National Register of Historic Places. Two historic properties are in the project’s area of potential effects: Mary Miller House and Sundial Dairy. However, the Virginia State Historic Preservation Officer has concurred that neither property would be adversely affected by CBA A.

FHWA finds that the impacts to historic properties are not significant.

### Surface Waters

Surface waters in the area consist of Cooks Creek and several intermittent or ephemeral unnamed tributaries and several farm ponds. The U.S. Environmental Protection Agency (EPA) and the Virginia Department of Environmental Quality (VDEQ) have categorized

Cooks Creek as impaired because water quality does not meet water quality standards for fecal coliform bacteria and benthic aquatic life. The EPA and VDEQ have established total maximum daily loads for the applicable pollutants (fecal coliform bacteria, sediment, and phosphorous). The principal sources of these pollutants are agricultural, residential, and urban runoff.

Approximately ½ mile of streams would be disturbed by the planning corridor associated with CBA A. Pipe culverts likely would be the preferred method of carrying the smallest streams under the roadway. Culverts would be countersunk to provide for low flow conditions and so that natural bottoms could reestablish inside the culverts. Bridges likely would be used at Cooks Creek, and such bridges would be comparable to existing bridges downstream that carry Route 11 and Route 275 over Cooks Creek. Any unavoidable stream relocations will be performed using natural stream design, which means that the channel should mimic the dimension, pattern, and profile of a representative reference stream reach.

Compensation for stream impacts may be provided as part of permit conditions for authorizations issued by the U.S. Army Corps of Engineers and VDEQ. Because these agencies determine the compensation requirements for stream impacts on a case-by-case basis, the requirements for CBA A would be determined with those agencies as part of the permit application process during final design. Compensation may involve enhancement or restoration to stream and riparian areas, use of credits from an approved stream mitigation bank, or payments to the Virginia Aquatic Resources Trust Fund.

Minor long-term water quality effects could occur as a result of increases in impervious pavement surfaces, increases in traffic volumes, and associated increases in pollutants washed from the road surface into receiving streams. Because none of the receiving streams are elements of local public water supplies, the potential for human health effects from roadway runoff is minimal. Moreover, temporary and permanent stormwater management measures, including detention basins, vegetative controls, and other measures, would be implemented to minimize potential degradation of water quality. These measures would reduce or detain discharge volumes and remove pollutants. The requirements and special conditions of any required permits for work in and around surface waters would be incorporated into construction contract documents. The construction contractor would be required to comply with those conditions and with the pollution control measures specified in VDOT's Road and Bridge Specifications.

FHWA finds that the impacts to surface waters are not significant.

### Wetlands

Wetlands in the area are small in size and scattered in distribution. The five wetlands along CBA A are palustrine emergent (PEM) systems. Candidate Build Alternative A would impact approximately 0.8 acres of wetlands, which a relatively minor amount for a project of this nature. Measures to avoid and minimize impacts to wetlands would be implemented where feasible. For unavoidable wetland impacts, during final design

VDOT will develop compensatory mitigation in accordance with what the federal and state water quality permitting agencies determine acceptable. Such compensation would account for lost wetland types and functions and could include construction of replacement wetlands onsite or offsite, enhancement of existing wetlands, use of credits from an approved wetlands mitigation bank, or payments to the Virginia Aquatic Resources Trust Fund.

FHWA finds that the impacts to wetlands are not significant.

### Floodplains

The Federal Emergency Management Agency (FEMA) mapping of floodplains indicates the presence of a 100-year floodplain along Cooks Creek. Crossings of Cooks Creek would be designed so that potential increases in flood levels would be minimal and that no floodplain encroachments would increase the probability of flooding or the potential for property loss and hazard to life during the service life of any bridges or other drainage structures and their roadway approaches. Candidate Build Alternative A would not significantly impact fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, forestry, natural moderation of floods, water quality maintenance, groundwater recharge, and other natural and beneficial floodplain values. The project would not encourage, induce, allow, serve, support, or otherwise facilitate additional or incompatible base floodplain development. Therefore, CBA A would not have an effect on flooding risks. The floodplain encroachments would not be “significant encroachments” as defined in 23 CFR 650.105(q) because: 1) they would pose no significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or that provides a community’s only evacuation route; 2) they would not pose significant flooding risks; and 3) they would not have significant adverse impacts on natural or beneficial floodplain values.

Sections 107 and 303 of VDOT’s specifications require the use of stormwater management practices to address concerns such as post-development storm flows and downstream channel capacity. These standards require that stormwater management ponds be designed to reduce stormwater flows to pre-construction conditions for up to a 10-year storm. VDOT would adhere to its specifications to prevent an increase in flooding risks associated with the project. It is expected that backwater elevations and velocity increases would be minimal or nonexistent. During final design, a detailed hydraulic survey and study would evaluate specific stormwater discharges. This evaluation would help ensure that no substantial increases in downstream flooding would occur.

Through coordination with Rockingham County floodplain management officials, the local floodplain ordinance was obtained and reviewed. The ordinance requires that any proposed development not result in increasing the elevation of the 100-year flood by more than one foot at any point. This project would be consistent with that provision.

FHWA finds that the impacts to floodplains are not significant.

## Noise

*Context.* The context of the project is such that a certain amount of noise is already present as evidenced by the ambient noise levels noted in the noise analysis (38 to 69 dB(A)). (The noise study contains a description of the characteristics of noise, including the A-weighted decibel (db) scale (db(A)) and the equivalent steady state sound level (Leq).) By comparison, ambient noise levels in undeveloped areas can be in the low 30s (db(A)) or even lower.

*Intensity.* The intensity of the noise impacts consists of 13 receptor locations that would be impacted under 2030 build conditions according to the FHWA Noise Abatement Criteria (NAC). None of the impacted sites fall within Activity Category A of the NAC, which is defined as “Lands on which serenity and quiet are of extraordinary and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.” All impacts are the result of approaching or exceeding that NAC, and there would be no substantial increases in noise levels (10 or more db(A) over existing levels). The greatest noise increase for impacted properties is 13 db(A) as compared to the No-Build Alternative, and would be experienced at the exterior of the residences. The noise impacts identified for the project would not be continuous, but rather are based on the worst hourly traffic conditions in the project’s design year.

FHWA noise regulations (23 CFR 772.13(d)) discuss a situation whereby noise abatement measures other than those listed can be utilized. One of the criteria is that there has to be a severe noise impact. FHWA’s *Highway Traffic Noise and Abatement Policy and Guidance* sheds light on determining a severe impact, and states that “...the affected activities experience traffic noise impacts to a far greater degree than other similar activities adjacent to highway facilities, e.g., residential areas with absolute noise levels of 75 db(A) Leq(h) or more, residential areas with noise level increases of 30 db(A) or more over existing noise levels.” Although the determination of a severe impact is in the context of noise abatement, the concept can be used to aid in the determination of whether the noise impacts are significant. The noise impacts from the project are not severe for any of the 13 impacted receptor locations as the highest absolute noise levels (71 db(A)) and greatest noise level increase (13 db(A)) are below the 75 db and 30 db threshold, respectively.

*Mitigation.* As stated in the noise analysis, noise mitigation measures that have been considered for this project include acquisition of additional right-of-way to provide buffer zones between the highway and adjacent noise-sensitive land uses, traffic management measures, and the construction of noise barriers and earth berms. Noise barriers appear to be feasible and within the State Noise Abatement Policy criteria for cost effectiveness for seven properties. Further analysis of potential noise barriers at these locations would be conducted during final design.

FHWA finds that the noise impacts are not significant.

### Indirect and Cumulative Effects

*Indirect Effects.* The most common indirect effects associated with roadway projects relate to induced development; that is, development and the effects of such development that would not otherwise occur if the project were not constructed. Lands surrounding CBA A currently can be accessed from the existing road network. As such, they are subject to development even if the absence of the construction of CBA A assuming appropriate zoning and other local approvals. Construction of this project would enhance access into these currently undeveloped lands, and the project could make it easier for property owners to develop their lands. However, the project by itself would not be the direct cause of such development because other factors, such as economic conditions and local land use decisions, play a large role in development decisions. The area is planned for future development and some development has already occurred in nearby areas without a bypass being in place.

The bypass would be consistent with local planning regarding land use goals in the surrounding area. In addition, the Commonwealth Transportation Board designated CBA A as a limited access roadway, meaning that access would only be provided at the existing intersections at Route 257, Route 704, and Route 257/Route 42. This lack of direct access from adjacent properties would minimize any development that could be caused by the construction of CBA A.

*Cumulative Effects.* Table 4 in the Revised Environmental Assessment summarizes the more prominent environmental resources in the study area that would be impacted by the project, the effects that these resources have experienced from past and present actions, the incremental effect expected from CBA A, identification of reasonably foreseeable future actions, and the potential effects that may occur from reasonably foreseeable future actions in the study area. Any effects to the impaired Cooks Creek from future actions would be subject to the same water quality permitting authorities as CBA A, and the mitigation would be based on what the permitting agencies determine acceptable. Any future conversion of farmland would be in accordance local zoning requirements.

FHWA finds that the indirect effects and the cumulative effects are not significant.

### **Council on Environmental Quality's Regulations**

The Council on Environmental Quality's regulations require consideration of a project's context and intensity in determining whether the project will have a significant impact (40 C.F.R. 1508.27). Regarding context, the regulations state, "Context means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant."

Since this project is a site-specific action, significance depends upon the effects of the project on the project area.

Regarding intensity, the regulations identify issues that should be considered in determining if the intensity of a project's impacts is substantial enough to warrant the preparation of an environmental impact statement (40 C.F.R. 1508.27(b)(1-10)). These issues are considered in the determination of whether there is a significant impact. The issues are addressed as follows:

1. *Impacts that may be both beneficial and adverse* – The project would result in a few beneficial impacts on the human environment. An alternative route for traffic, including truck traffic, would be provided so that it does not have to travel through downtown Bridgewater. Conflicts between vehicular, pedestrian, and bicycle travel on existing roads would be reduced, thereby increasing safety.

We find that these beneficial impacts, when taken in conjunction with the adverse impacts, are not significant.

2. *The degree to which the project affects public health or safety* – The project should not adversely affect public health and safety. On the contrary, since conflicts between vehicles and pedestrians would be reduced, public health and safety should improve. Also, the project will not cause or contribute to an exceedance of the National Ambient Air Quality Standards.

3. *Unique characteristics of the geographical area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers or ecologically critical area* – No historic or cultural resources, park lands, wild and scenic rivers, or ecologically critical areas would be adversely affected by the project. The project's effects to farmland (including prime farmland) and wetlands, as well as the reasons that those effects do not represent a significant impact, are explained above.

4. *The degree to which the effects on the environment are expected to be highly controversial* – Based on case law, it is our position that the term "controversial" refers to cases where substantial dispute exists as to the size, nature, or effect of the action rather than to the existence of opposition to a use, the effect of which is relatively undisputed. On this project, there has been no documented dispute regarding the size, nature, or effect of the project from the state or federal environmental resource agencies and no agency has opposed the project.

Based on the above, we find that the degree to which the effects on the environment are expected to be highly controversial does not require an environmental impact statement for this project.

5. *The degree to which the effects on the quality of human environment are highly uncertain or involve unique or unknown risks* – There are no known effects on the quality of the human environment that can be considered highly uncertain or involve unique or unknown risks.

*6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration* – This action will not set a precedent for future actions with significant effects or represent a decision in principle about a future consideration. The project has logical termini and independent utility and represents a reasonable expenditure of funds; it does not force additional improvements to be made to the transportation system. This decision will not establish a precedent regarding the requirements of the National Environmental Policy Act as they will be applied to future projects.

*7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts* - This action has logical termini and independent utility and does not force additional transportation improvements to be made to the transportation system. Cumulative effects were addressed in the Revised Environmental Assessment and in this document, and we find that they are not significant.

*8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss of significant scientific, cultural, or historic resources* – No districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places would be adversely affected by the project.

*9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act* – No federally endangered or threatened species or critical habitat will be affected by the project.

*10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment* – The project does not threaten a violation of any Federal, State, or local law for the protection of the environment. All applicable permits will be acquired prior to construction.

### **Conclusion**

Based on the foregoing information and other supporting information, we find that the proposed project will not have a significant impact on the environment. Therefore, an Environmental Impact Statement is not warranted, and the Finding of No Significant Impact is being issued accordingly. The Finding of No Significant Impact will be reevaluated as appropriate pursuant to 23 C.F.R. 771.129(c) as major approvals are requested from FHWA.