

D-List Categorical Exclusion – Washington Pike

City of Knoxville/Knox County

TN-PIN: 043090.00

Date: 05/30/2014

Environmental Commitments

Commitments are involved on the project.

List of Environmental Commitments

Per the study to determine potential effects of the project on the federally endangered Indiana bat (*Myotis sodalis*), and with concurrence of USFWS (letter dated August 9, 2013), a commitment will be added to the project plans that requires the removal of trees from October 15 to March 31.

Per FHWA guidance, a tree with a trunk diameter greater than 100 mm (4 in) measured 100 mm (4 in) above the ground line is considered a "fixed object" along the roadway; therefore, a commitment will be added to the project plans that requires any plantings within the clear zone to not exceed a trunk diameter greater than 4 inches at maturity.



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D-List Categorical Exclusion

Memorandum

To: Ms. Leigh Ann Tribble
Environmental Program Engineer - Region 1
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From: Mrs. Ann Andrews
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Tennessee Department of Transportation (TDOT)
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Date: 05/30/2014

Project Information

Route: Washington Pike

Project Termini: North of I-640 to Murphy Road

City/Town/County: City of Knoxville/Knox County

MPO/RPO/TPO Area: Knoxville Regional TPO **PIN #:** 043090.00

	PE #	Right-of-Way #	Construction #
Federal	STP-M-9109(64)	STP-M-9109(64)	STP-M-9109(64)
State	47953-1516-54	47953-2517-54	47953-3518-54

Project Planning

- The project is in an MPO/TPO**—The relevant Transportation Improvement Program (TIP) page is included in the attachment.
- The project is in an RPO**—The relevant State Transportation Improvement Program (STIP) page is included in the attachment.

Project Description

The City of Knoxville is proposing to improve Washington Pike, an urban minor arterial, in northeastern Knox County. The project corridor begins at the ramps to Interstate 640 (I-640) and extends northeast to Murphy Road, a distance of approximately 1.7 miles. At the project start, Washington Pike is a 4-lane divided section from I-640 to Greenway Drive. The intersection with Greenway Drive includes turn lanes to serve heavy traffic volumes traveling to and from I-640. Just east of Greenway Drive, Washington Pike tapers back to a two-lane section with no shoulders. Short turn lanes along Washington Pike serve the intersecting side roads at New Harvest Lane, Rising Oak Way, Aylesbury Drive, McCampbell Drive, and Murphy Road. Washington Pike widens to a 3-lane section with a shoulder on the east side of the road between the intersections with Mill Road and Steeple Shadow Way/ Babelay Road. Other intersecting side streets without turn lanes include Edmondson Lane and Trestle Way. There are currently traffic signals at Greenway Drive, Mill Road, and Murphy Road.

The proposed project will widen the east/west section of Washington Pike from Greenway Drive to Murphy Road to include four 11-foot travel lanes, two lanes in each direction, with a grassed median and turn lanes at the required intersecting side streets. The required intersecting side streets are Greenway Drive, New Harvest Lane, Rising Oaks Way, Mill Road, Steeple Shadow Way/Babelay Road, Aylesbury Drive, Edmondson Lane, Trestle Way, McCampbell Drive, and Murphy Road. This section of the project will also include 2-foot curb and gutter, 5-foot sidewalks, and 4-foot bike lanes on both sides of the roadway. The proposed sidewalks will tie to Knox County's New Harvest Greenway loop at the intersection with Greenway Drive. At the intersection approaches with Mill Road and McCampbell Drive, Washington Pike will be realigned to correct horizontal deficiencies. Turn lanes will also be added along Greenway Drive at the western project end as it approaches Washington Pike, and along Murphy Road at the eastern project end as it approaches Washington Pike. The project would include small cut and fill and retaining walls where needed. The north/south section of Washington Pike between the Interstate 640 ramps and Greenway Drive will also be restriped to provide additional turn lanes approaching the westbound interstate ramps.

It should be noted that the typical section design is being guided by the City's request for 'first flush capability' as required by the City's storm water quality ordinance. As an option, the project's design may eliminate or reduce some curb and gutter sections with the construction of grass swales.

Functional plans and typical sections depicting the build alternative are included in Appendix B.

Purpose and Need

At the project start, Washington Pike has seen a rise in commercial development at its intersection with Greenway Drive. Due to the growth of this area, new subdivisions have been constructed off Washington Pike east of Mill Road. In addition, Knox County has constructed the New Harvest Park and Greenway loop just northeast of the intersection with Washington Pike and Greenway Drive. The area's significant development has resulted in increased traffic but without the necessary modifications to the infrastructure to improve traffic operations and accommodate continued growth.

The purpose of widening Washington Pike is to provide a transportation facility that is capable of handling the existing and future traffic volumes, relieve existing traffic congestion, support economic development in the area, and provide alternative modes of transportation. Currently no sidewalks or bike lanes exist along Washington Pike. The addition of 5-foot sidewalks and 4-foot bike lanes to either side of the roadway would create a traffic circulation system that minimizes conflicts between pedestrians, bicyclists and vehicles, thus providing alternate modes of transportation that would serve the surrounding neighborhoods and enhance the value of the existing transportation system.

The goals and objectives of an improved Washington Pike corridor include:

- Create a traffic circulation system that minimizes conflicts between pedestrians, bicyclists and vehicles;

- Enhance Washington Pike to adequately serve the commercial/retail/residential development in the area relative to capacity, circulation and access to I-640;
- Improve east-west mobility in the Knoxville Center Mall area;
- Enhance regional and local economic development opportunities;
- Modify key intersections to increase operational safety and capacity;
- Create a greenway system in conjunction with stormwater control programs;
- Improve transportation linkages throughout the northeastern quadrant of the City;
- Be compatible with and serve the needs of the surrounding neighborhoods.

Traffic:

The average daily traffic (ADT) in the project corridor for the baseline year (2008) was 12,200 vehicles per day (vpd). The ADT for 2013 was approximately 14,300 vpd, and the vpd for the design year 2033 is projected to increase to 22,800 vpd.

Public Involvement

- No public meeting/hearing was held on the project.
- A public meeting/hearing was held on the project. The meeting/hearing summary is included in Appendix C.

Working Group meetings were held with interested parties on July 18 and October 9, 2006 to discuss improvements to Washington Pike and Millertown Pike. Representatives in attendance were from the Alice Bell-Spring Hill Association, Knoxville Center Mall Area Businesses, Knox County Metropolitan Planning Commission, Northeast Knox Preservation Association, Fountain City, Knox County, and the City of Knoxville. Additionally, project update meetings were held in May and July 2012 to update interested parties on the status of the project. Attendance sheets, meeting agendas, meeting minutes, and a summary of comments received and responses are included in Appendix C.

There were no major concerns voiced in regard to the project itself; however, some concern was raised by neighborhood representatives that project information was not being made readily available to the public. In response to this concern, the City of Knoxville has posted all available project information, including approved environmental reports to a project website hosted by the city:

www.cityofknoxville.org/engineering/projects/WashingtonPike_I640toMurphyRoad.pdf

The website location and details have been directly communicated via letter to those neighborhood representatives who expressed concern. In addition, the project website has a direct link to the City of Knoxville main website under the heading "City Engineering Projects Update", so that the general public will have easy access to all posted information.

Project Alternatives

The Build Alternative would consist of widening Washington Pike to four 11-foot traffic lanes (two lanes in each direction), with a grass median and turn lanes at Greenway Drive, New Harvest Lane, Rising Oaks Way, Mill Road, Steeple Shadow Way/Babelay Road, Aylesbury Drive, Edmondson Lane, Trestle Way, McCambell Drive, and Murphy Road. The improved typical section would also include the installation of 2-foot curb and gutter, 5-foot sidewalks, and 4-foot bike lanes on both sides of the roadway. In addition, the project would realign Washington Pike at its intersection approaches with Mill Road and McCampbell Drive to correct roadway deficiencies and will place retaining walls where needed. The proposed corridor is 200 feet in width

and extends for approximately 1.7 miles. The typical section design is guided by the City's request for first flush capability as required by the City's storm water quality ordinance. As an option, this design may eliminate or reduce some curb and gutter sections with construction of grass swales.

The No-Build Alternative would only provide routine maintenance activities that are a part of an ongoing plan for the continuing operation of the existing system in the project area. The No-Build Alternative would have no direct impacts to the environment; however, it would not meet the purpose and need of the proposed project. For this reason, the No-Build Alternative was not selected.

Relocation and Right-of-Way (ROW) Impacts

- The project does not involve relocation.
- The project involves relocation and the relevant Conceptual Stage Relocation Plan is included in Appendix D.
- The project involves permanent easements.

The project would require the acquisition of approximately 5.5 acres of right-of-way. This would involve the relocation of one business and one residence. Additionally, 23 private residences, 13 businesses, and three non-profit institution (two churches and one property owned by Knox County) parcels would be impacted by the acquisition of right-of way and/or easements. A search of available residential and commercial real estate databases was undertaken. A sufficient supply of residential and commercial relocation properties are available in the vicinity of the project.

The City of Knoxville will make relocation assistance available to all eligible persons impacted by this project, including residences, businesses, farm operations, non-profit organizations, and those requiring special services or assistance. The City will administer a relocation program under the rules, policies, and procedures set forth in the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended, the Tennessee Uniform Relocation Assistance Act of 1972, implementing federal regulations, TCA 13-11-101 through 119, and Chapter IX of the State of Tennessee Department of Transportation Right-of-Way Manual. The City of Knoxville's relocation program is practical and will allow for the efficient relocation of all eligible displaced persons in accordance with State and Federal Guidelines.

TECHNICAL STUDIES

Ecology

- The Ecology Report is included in the Technical Studies attachment.

An Ecology Report was not completed for this project; however an Environmental Screening Report (ESR) was completed and included in Appendix E.

The study area falls within the Holston and Fort Loudon watershed which drains to the Holston and Tennessee River. There are two streams and several wet weather conveyances within the study area. See the U.S. Geological Service (USGS) location map (Figure 3) of the ESR, included in Appendix E.

Stream 1 – Unnamed Tributary to Love Creek:

Stream 1 is a spring stream, charged by a spring-fed pond located on the northwest side of Washington Pike approximately 180 feet from the existing road across from Trestle Way. The spring discharges southward into a large wetland (Wetland 1) located approximately 30 feet west from a proposed fill area. The stream then flows south through several culverts including a 24-inch metal culvert that crosses Aylesbury Drive. From Aylesbury Drive, the stream flows through approximately 50 feet of a mowed ditch line and into a storm water

catch basin before crossing Washington Pike in a 36-inch reinforced concrete pipe culvert. The stream then flows for approximately 250 feet into a large wetland (Wetland 2) and ultimately into Love Creek. This outlet point has a channel bottom width of 2-3 feet, the top of bank width is 3-4 feet, the bank height is 1-2 feet, the water depth is 4-6 inches, and the water width ranges from 2- 4 feet. There are several storm water inlets and wet weather conveyances that contribute to this stream. There may be impacts to this stream during the construction phase, therefore best management practices will need to be implemented during construction to prevent erosion and sedimentation to the stream.

Stream 2 - Murphy Creek:

Stream 2 is a perennial, blue-line stream called Murphy Creek. It flows westward underneath Murphy Road approximately 150 feet northwest from the Washington Pike intersection through a box culvert. Murphy Creek connects with Whites Creek then outfalls into First Creek discharging ultimately into the Tennessee River/ Fort Loudon Lake. On the east (inlet) side of Murphy Road, Murphy Creek has a channel bottom width of 10-15 feet, the top of bank width is approximately 25 feet, the bank height ranges from 3-6 feet, the water depth is 6 inches to 1 foot, and the water width ranges from 10-15 feet. On the west (outlet) side of Murphy Road, the creek has a channel bottom width of 15-20 feet, the top of bank width is approximately 20-25 feet, the bank height ranges from 2-4 feet, the water depth is 1-2 feet, and the water width ranges from 10-15 feet. Minimal impact is expected during and after construction with the implementation of best management practices to prevent erosion and sedimentation into the storm drain system, wet weather conveyances, and surface waters.

The project has been coordinated with the U.S. Army Corps of Engineers (USACE). In the agency coordination response letter dated April 23, 2013, the agency states the project would involve work in waters of the US, therefore, a Department of the Army (DA) permit is required. Further impacts to streams will be assessed when the design of the project is more complete, and additional information will be provided in the right-of-way and/or construction reevaluations. The City of Knoxville will be responsible for obtaining and obiding by all requirements of the DA permit.

Refer to the USACE coordination response letter located in Attachment E.

A discussion of wetlands and Threatened and Endangered species is included below.

Executive Order 11990—Protection of Wetlands

- No wetland areas protected under Executive Order 11990 will be impacted.
- Wetlands are impacted and supporting documentation is included as an attachment.

U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps and USGS quadrangle maps were reviewed to determine if any wetlands or potential wetland habitats exist within the project site. In addition, field observations were made to ensure that the informational resources were accurate. Based on these techniques and procedures, no wetlands were found with the area of potential effect (APE); however, three wetlands were identified adjacent to the study area.

Wetland 1:

Wetland 1 is located on the west side of Washington Pike across from Edmondson Road and Trestle Way approximately 85 feet from the existing roadway. This open water/ponded wetland would be classified as a palustrine, aquatic bed, persistent, flooded, and is spring fed. This spring and pond were used for agricultural purposes in the past. There is standing water and an abundance of vegetation and soils with hydric characteristics throughout the area. The proposed roadway will have a fill area adjacent to this wetland with approximately 25-30 feet of buffer.

Wetland 2:

Wetland 2 is located downstream from the spring-fed unnamed tributary to Love Creek. This wetland is located over 250 feet away from the proposed APE to the southeast and will not be impacted as best management practices are to be applied.

Wetland 3:

Wetland 3 is an open water, protected wetland located on New Harvest Lane adjacent to the farmers market and the USDA office building. It is approximately 30 feet upgradient from the proposed project area and will not be impacted if best management practices are applied.

As previously stated, the project has been coordinated with the USACE. The USACE letter dated April 23, 2013, included in Appendix E states the project would involve work in waters of the U.S.; therefore, a DA permit is required. USACE has no objections to the project, provided proper permits are applied for and obtained prior to any disturbance to wetlands that may occur due to project construction.

The project has also been coordinated with the USFWS. In the agency coordination response letter dated April 3, 2013 the agency states: Information available to the Service does not indicate that wetlands exist in the vicinity of the proposed project. However, our wetland determination has been made in the absence of a field inspection and does not constitute a wetland delineation for the purposes of Section 404 of the Clean Water Act. The Corps of Engineers should be contacted if other evidence, particularly that obtained during an on-site inspection, indicates the potential presence of wetlands. Refer to the USFWS letter located in Appendix E.

The identified wetlands are not within the project APE and no impacts are expected from the proposed roadway improvements. Proper delineation methods and permitting will be required prior to construction. Best management practices will be implemented prior to construction to prevent erosion and sediment from entering the wetlands.

Endangered Species

USFWS

- The proposed project meets the TDOT/U.S. Fish and Wildlife Service (USFWS) Memorandum of Agreement (MOA). No further coordination with USFWS is required. A copy of the MOA is included as an attachment.

- The proposed project has been coordinated with the USFWS Field Office. The USFWS responses dated April 3, 2013 and August 9, 2013 are included in Appendix E. The USFWS correspondence dated April 3, 2013 stated: Upon review of the information provided and available imagery, removal of suitable summer roosting habitat for the federally endangered Indiana bat (*Myotis Sodalis*) may be required for the project. The agency requested that a qualified individual assess potential impacts and determine if the proposed project may affect this species.

A habitat assessment was completed and submitted to USFWS. In a letter dated August 9, 2013, the agency acknowledged the completion of a habitat assessment and determined that potential effects to the federally endangered Indiana bat are unlikely due to overall marginality of the habitat from development in the area. The letter further states a commitment will be added to the project plans requiring the removal of trees from October 15 to March 31. In light of this commitment and the results from the habitat assessment indicating marginal habitat suitability, USFWS concurs that the proposed project is "not likely to adversely affect" the Indiana bat. The USFWS is unaware of any federally listed or proposed species that would be impacted by the project. Therefore, based on the information available at this time, they believe that the requirements of section 7 of the Endangered Species Act of 1973, as amended, are fulfilled for all species that currently receive protection under the Act. Obligations under section 7 of the Act must be reconsidered if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

TDEC Database

- On April 27, 2012 the preparer checked the Tennessee Department of Environment and Conservation (TDEC) database to determine if any federal or state listed endangered species are known to exist in the project area.
- N/A—A check of the TDEC database was not required.

TDEC Natural Heritage Inventory Program

- The proposed project was coordinated with TDEC's Division of Natural Areas. The TDEC response dated April 27, 2012, included in Appendix E, states: There are two known rare species within a one mile radius of the project area, including the northern pinesnake (*Pituophis melanoleucus melanoleucus*) and Canada lily (*Lilium canadense*). There are nine other rare species that are within a four mile radius of the project area. None of these species were observed with the proposed project area, but conducive habitat for most of these species does exist within or adjacent to the study area. Two federally-listed species were mentioned as occurring within 4 miles of the project. These are the endangered shiny pigtoe (*Fusconaia cor*) and the threatened snail darter (*Percina tanasi*).

The TDEC letter further states: Because of the disturbed nature of the project corridor, few of the above species are likely to occur onsite. However, given suitable conditions, the Tennessee heelsplitter may occur in the Murphy Creek or Love Creek watersheds. The above record refers to 1921 collection from First Creek (of which Murphy Creek is a tributary). The pinesnake record also is historic.

The letter also states: Although not falling near the project site, the northern ridge and valley is home to a presumably endemic crayfish (Valley flame crayfish, *Cambarus deweesae*). The nearest known location of this species is approximately 20 miles west of the project in Anderson County. The species is confirmed only from four locations in Anderson and Roane counties. However, because inventories for burrowing crayfish are scant, the actual range of the species remains unknown. Populations reasonably may be anticipated from portions of Knox County. TDEC has requested documentation and photos of hydric soils and burrowing crayfish, if present (e.g. visible burrows or chimneys in ditches, riparian zones, and wetlands). The agency states the presence of such may warrant further evaluation or specimen collection by TDEC or TWRA biologists, as prudent.

TDEC advocates the use of native plant species for the stabilization of disturbed areas, and care should be taken to prevent re-vegetation of disturbed areas with plants listed by the Tennessee Exotic Pest Plant Council as harmful exotic plants.

- N/A—Coordination with TDEC's Natural Heritage Inventory Program was not required because either no plant species of concern were found during the TDEC database check or were determined not to be affected by the project.

TWRA

- The proposed project was coordinated with Tennessee Wildlife Resources Agency (TWRA). TWRA response dated July 17, 2013 is included in Appendix E. In the TWRA coordination response letter, the agency states: It is our understanding a small portion of the study area is located within the 100-year floodplain, two streams will be crossed, and no wetlands were found within the project footprint as a result of a survey. No endangered species have been recorded within one mile of the project and it is not anticipated to affect any federally or state-listed threatened or endangered species. Based upon these understandings, we do not anticipate adverse impacts to listed species under our authority due to the project and have no concerns or objection to the proposed project.
- N/A—Coordination with TWRA was not required because no animal species of concern were found during the TDEC database check.

Biological Assessment for Endangered Species

- No Biological Assessment is needed.
- A Biological Assessment will be required prior to construction.
- The Biological Assessment is included in the Technical Studies attachment.
- A concurrence letter dated mm/dd/yyyy is included as an attachment.

Executive Order 11988—Floodplain Management

- No encroachments upon the 100-year floodplain protected under Executive Order 11988 are involved.
- Encroachments upon the 100-year floodplain are involved. Federal Emergency Management Agency (FEMA) maps are included in Appendix F.

Portions of this project impact a FEMA defined floodplain where Base Flood Elevations (BFEs) have been determined; however, there is no floodway defined. Flood Insurance Rate Maps (FIRM) for the subject project have been checked. The subject project is included in the City of Knoxville Flood Insurance Study. The project will be designed such that a “No-Rise” certification will be achieved, stating “this project will not adversely impact the 100-year flood elevations, floodway elevations, and/or floodway widths”. The project is located on FIRM Nos. 47093C0142F and 47093C0161F, attached. As shown, a small portion of the project area lies within the 100-year floodplain at the crossing of Murphy Creek by Murphy Road. The design of the project will be in compliance with the floodplain management Criteria set forth in the National Flood Insurance Regulations of CFR Title 44 and consistent with the requirements of floodplain management guidelines for implementing Executive Order 11988 and FHWA guidelines 23 CFR 650a.

Farmland

- The project does not convert farmland to a transportation use.
- If the project converts farmland, the total points in the National Resource Conservation Service (NRCS) Farmland Impact Conversion Form are less than 160 points.

In accordance with Farmland Protection Policy Act (FPPA), farmland does not include land already in or committed to urban development. The project area is located in an area that is presently developed with urban and commercial land uses and has been zoned accordingly. Therefore, the FPPA does not apply and coordination with NRCS is not required.

Wild and Scenic Rivers

- The project does not involve a designated Wild and Scenic River.
- The project involves a designated Wild and Scenic River.

Air Quality

Transportation Conformity

- The Air Quality Report is included in Appendix G.
- Air quality coordination information is included in Appendix G.

This project has been coordinated with TDOT's Air Quality Section. In an email dated 11/30/2012, TDOT provided the following statement for Transportation Conformity.

This project is located in the Knoxville ozone and PM2.5 nonattainment areas. The project is included in the Knoxville Regional Transportation Planning Organization 2009-2034 Knoxville Regional Mobility Plan as LRMP #615 and the Transportation Improvement Program as TIP #2011-049. Therefore, the project conforms to the State Implementation Plan (SIP).

Mobile Source Air Toxics (MSAT)

- The project is exempt from MSAT analysis. Coordination information is included in Appendix G.

- An MSAT analysis is required.
- MSAT supporting documentation is included in Appendix G.

The Build Alternative includes the widening of Washington Pike. The highest projected design year 2033 Average Annual Daily Traffic (AADT) on Washington Pike is 33,000 vpd. This is substantially lower than the FHWA criterion for "Projects with Low Potential MSAT Effects" (minor widening projects) of 140,000 to 150,000 AADT. Therefore, the project meets the criteria for a "Project with Low Potential MSAT Effects."

Refer to the MSAT section of the Air Quality Analysis Report located in Appendix G for additional information.

Particulate Matter less than 2.5 microns (PM_{2.5})

- The project area is in a nonattainment area for PM_{2.5}.
- The project area is in attainment for PM_{2.5}.
- Inter-agency consultation (IAC) documentation is included in Appendix G.

A PM_{2.5} Hot-Spot Determination was completed for the project and submitted to the Knoxville Area Interagency Consultation (IAC) group on November 15, 2012. The Determination concluded that the project was "not a project of air quality concern." The IAC members concurred with the Determination on the following dates: FHWA, November 27, 2012; EPA, November 26, 2012; TDEC, November 16, 2012; and Knox County, November 26, 2012. The PM_{2.5} Hot-Spot Determination, IAC concurrence responses, and PM_{2.5} clearance record are included in Appendix G.

Noise

- This project is Type III. Coordination information is included as an attachment.
- This project is Type I or Type II. The Noise Technical Report is included in Appendix H.

In compliance with 23 USC Section 109(h) and (i), the Federal Highway Administration (FHWA) established a standard for the assessment of highway traffic-generated noise. The standard, published as Part 772 of Title 23 of the Code of Federal Regulations (23 CFR Part 772), provides procedures to be followed in conducting noise analyses that will protect the public health, welfare and livability. In accordance with the Noise Control Act of 1972, coordination of this regulation with the Environmental Protection Agency (EPA) has been completed. A Noise Technical Report has been prepared in accordance with 23 CFR Part 772. A summary of this report is below.

Existing ambient noise levels were measured at 10 noise monitoring receptor locations throughout the project corridor. According to 23 CFR 772, existing noise levels are defined as "the worst noise hour resulting from the combination of natural and mechanical sources and human activity usually present in a particular area."

An estimation of traffic-related sound levels associated with the existing (2012), no-build (2033) and build (2033) alternatives was conducted using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) version 2.5. Predicted noise levels for the build scenario were calculated and compared to the no-build alternative and to the existing conditions noise levels at 153 noise sensitive receptors within the study area. Based on the TNM predictions in the 2033 build scenario, 13 Noise Ambient Criteria (NAC) Category B (residential) receptors are expected to be impacted.

Noise abatement measures were considered for all 13 impacted receptors. As Washington Pike is not a limited access roadway, most of the impacted receptors have driveways on Washington Pike. These driveways will remain in place with the proposed improvements. The driveway openings would prevent the

construction of a continuous and acoustically effective noise barrier and would negatively affect property access and possible maintenance requirements. Therefore, construction of noise barriers is not feasible for this project.

Construction noise impacts – some of them potentially extreme – will occur due to the close proximity of numerous noise-sensitive receptors to project construction activities. All reasonable efforts should be made to minimize exposure of noise-sensitive areas to construction noise impacts. The contractor shall follow TDOT's Standard Specifications for Road and Bridge Construction.

Section 4(f) of the Department of Transportation Act of 1966

- No land given protection under Section 4(f) will be affected by this project.
- Section 4(f) land is involved. The required Section 4(f) evaluation is included in the Technical Studies attachment.
- A *de minimus* finding for this project is included in the Technical Studies attachment.

One National Register of Historic Places (NRHP) eligible property is located within the project area of potential effect (APE), the Murphy Springs Farm. Approximately 150 square feet of temporary construction easement will be required along Murphy Road and approximately 310 square feet of temporary construction easement will be required along Washington Pike within the proposed NRHP boundary. No right-of-way is required from within the proposed NRHP boundary for the proposed improvements. The proposed project would not cause the physical destruction or removal of any structure. The proposed easements contain grassy fields that are mowed for hay along Murphy Road and Washington Pike and once the proposed project is completed, the easements would be returned to grass. The proposed project will not change the property's function as agricultural fields or its setting in a rural environment that has some urban incursions.

Section 6(f) of the Land and Water Conservation Fund Act of 1965

- Section 6(f) is not involved.
- Section 6(f) is involved. Supporting documentation is included as an attachment.

Section 106 of the National Historic Preservation Act of 1966

Cultural Resources

- This project meets a TDOT/Tennessee State Historic Preservation Office (SHPO) Memorandum of Understanding (MOU). No further coordination with the SHPO is necessary.
- Combined Cultural Resources Report was prepared (the combined report is in the Technical Studies attachment).
- SHPO combined cultural resources letter dated mm/dd/yyyy is included as an attachment.
- Separate Cultural Resources Reports were prepared (see next two sections below). The Historic/Architectural and the Archaeology Reports are available upon request from the TDOT Environmental Documentation Office.
- SHPO historic/architectural resources letter dated 03/12/2013 is included in Appendix I.
 - National Register of Historic Places listed or eligible historic/architectural properties are affected.
 - No National Register of Historic Places listed or eligible historic/architectural properties are affected.

- SHPO archaeological resources letter dated 07/30/2013 is included in Appendix I.
- National Register of Historic Places listed or eligible archaeological properties are affected.
- No National Register of Historic Places listed or eligible archaeological properties are affected.

In compliance with Section 106 of the National Historic Preservation Act of 1966, the proposed project APE was surveyed for properties listed or eligible for listing on the NRHP. A search of the Tennessee State Historic Preservation Office files revealed no resources listed on the National Register of Historic Places (NRHP) in the general vicinity of the project. A historic structures survey was conducted in April 2012. Results of the field survey found 14 resources within the APE of which 13 resources were determined not eligible. One resource was recommended eligible for the NRHP, the Murphy Springs Farm (KN-2586).

The Murphy Springs Farm is located on the east side of Murphy Road at the corner with Washington Pike along Murphy Creek. The property contains a circa 1841 Gothic Revival house and a collection of outbuildings.

The property is eligible for the NRHP based on Criteria A as an example of a family farmstead in the Early Settlement of Knox County and Criteria C for its example of Gothic Revival architecture. The farm was purchased in 1797, less than a decade after the city of Knoxville was laid out. The acreage has been maintained as farmland or timberland and stayed within the family since that time. The farmstead, surrounded by agricultural fields, retains many buildings from the turn of the century dairy operation. The house has been restored to its original Gothic Revival appearance with characteristic steep gables, entry porch, and molding around the windows and doors.

Proposed improvements at the Murphy Spring Farm will occur at the corner of Murphy Road and Washington Pike. Improvements include widening the roadway for the addition of travel and turn lanes and the installation of bike lanes, sidewalks, curb and gutter. Approximately 150 square feet of temporary construction easement will be required along Murphy Road from within the proposed NRHP boundary and approximately 310 square feet of temporary construction easement will be required along Washington Pike.

The project has been coordinated with the State Historic Preservation Office (SHPO) for architecture/history. In the coordination response letter dated 03/12/2013, the agency states: Based on the information provided, we find that the project area contains a cultural resource eligible for listing in the NRHP: Murphy Springs Farm. We further find that the project as currently proposed will not adversely affect this resource. The letter further states the agency has no objection to the implementation of the project. They request that should project plans change, the agency be re-contacted to determine what additional action, if any, is necessary.

The project was also surveyed for archaeological resources within the APE. A Phase I archaeological survey was conducted June 5-7. The APE was limited to the areas of construction. In all, the APE encompasses 40.9 acres (16.5 hectares) and includes areas that have been previously developed including extant building, roadways, parking areas, and areas of ground disturbance.

Only a single isolated find (IF) was recovered, IF1. It is a totally excavated resource consisting of a single unidentified lithic debitage flake made from Knox Gray chert, and is from an unknown cultural affiliation. Because IF1 is a totally excavated resource, no research potential remains, and as such, it is not eligible for listing on the National Register of Historical Places under Criterion D. Criteria A, B, or C do not apply.

The project has been coordinated with the State Historic Preservation Office (SHPO) for archaeology. In the coordination response letter dated 07/30/2013, the agency states: Based on the information provided, we find that the project area contains no archaeological resources eligible for listing in the NRHP. The agency requests to be re-contacted should project plans be changed or archaeological remains are discovered during construction to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act.

Cultural resources mitigation measures are included as an attachment.

Native American Consultation

- This project does not require Native American consultation. Verification that coordination is not required is included as an attachment.
- Pursuant to 36 CFR 800, a consultation letter dated 08/17/2012 was sent to the following tribes (*check below all tribes that apply*) and is included in Appendix I.
- Responses were received from the following tribes (*check below all tribes that apply*) and are included In Appendix I.
- No tribal responses were received.

Letters sent to/responses received from (Check all that apply):

Sent to	Received from		Sent to	Received from	
<input type="checkbox"/>	<input type="checkbox"/>	Absentee—Shawnee Tribe of Oklahoma	<input type="checkbox"/>	<input type="checkbox"/>	Muscogee (Creek) Nation
<input type="checkbox"/>	<input type="checkbox"/>	Alabama Quassarte Tribal Town	<input type="checkbox"/>	<input type="checkbox"/>	Poarch Band of Creek Indians
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Cherokee Nation	<input type="checkbox"/>	<input type="checkbox"/>	Quapaw Tribe of Oklahoma
<input type="checkbox"/>	<input type="checkbox"/>	Chickasaw Nation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Shawnee Tribe
<input type="checkbox"/>	<input type="checkbox"/>	Choctaw Nation of Oklahoma	<input type="checkbox"/>	<input type="checkbox"/>	Thlopthlocco Tribal Town
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Eastern Band of Cherokee Indians	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	United Keetoowah Band of Cherokee Indians in Oklahoma
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Eastern Shawnee Tribe of Oklahoma	<input type="checkbox"/>	<input type="checkbox"/>	Other—name of tribe
<input type="checkbox"/>	<input type="checkbox"/>	Kialagee Tribal Town	<input type="checkbox"/>	<input type="checkbox"/>	Other—name of tribe

The United Keetoowah Band of Cherokee Indians in Oklahoma responded on August 24, 2012. In the response the tribe states they have reviewed the project for Section 106 NHPA purposes, and cultural resources. The tribe states they have no objection or comment; however, if any human remains or funerary items are inadvertently discovered they wish to be contacted immediately.

Hazardous Materials

- No underground storage tanks or sources of hazardous materials are, or have been, located in the project impact area. If any hazardous materials are found during construction they will be handled and disposed of in compliance with applicable federal and state regulation. Verification that there are not sites or a study is not needed is included as an attachment.
- Hazardous material site(s) are involved.
- The Hazardous Materials (Phase I ESA) Report is included in the Technical Studies attachment.

Included in the ESR completed for the proposed project, found in Appendix E, is an assessment of underground storage tanks (USTs) and hazardous waste sites. The report indicates there are two UST sites adjacent to the project corridor, the Town and Country Market at 5704 Washington Pike (EPA ID No. U0013914656) and Weigels Gas Station #60 at 5904 Washington Pike (EPA ID No. U004066449). The Town and Country Market has one registered closed historical leaking USTs (LUST) on file with TDEC.

Per the ESR, there are no hazardous waste sites within the proposed project corridor; however, there is one registered Resource Conservation and Recovery Act (RCRA) hazardous waste generator adjacent to the study area at the Target located at 4700 New Harvest Lane (EPA ID No. 1010332501).

The project ESR report has been coordinated with the TDOT Hazardous Materials Section. In an email dated August 28, 2013, TDOT states: No RCRA hazardous waste generators are located within the study area. No active USTs are located within the study area. There are two USTs on adjacent properties.

In the event hazardous substances/wastes are encountered within the proposed right-of-way, their disposition shall be subject to all applicable regulations, including the applicable sections of the Federal Resource Conservation and Recovery Act, as amended; and the Comprehensive Environmental Response, Compensation, and Liability Act, as amended; and the Tennessee Hazardous Waste Management Act of 1983, as amended.

Environmental Justice

- No Environmental Justice issue is involved.
- Environmental Justice issues are involved.
- Environmental Justice documentation is included in the Technical Studies attachment.

No disproportionate impacts to minority or low income populations would result from this project. Washington Pike is being improved and would be of benefit to the surrounding community. There are no anticipated changes in or denial of access.

Other Issues

- No other issues are involved.
- Other issues are involved.
- Supporting documentation of other issues is included as an attachment.

Environmental Commitments

- Commitments are involved on the project and the list is found on the Environmental Commitments Green Sheet.
- Commitments are not involved on the project.

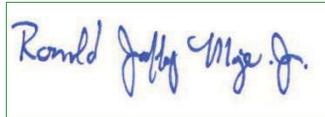
Preparer's Certification

I hereby certify that I have read and understand the *Guidance for TDOT Environmental Document Templates*.

This document has been reviewed for compliance with applicable federal, state, and local laws and regulations. It has been prepared in compliance with the Council on Environmental Quality Regulations for Implementing the Procedural Provision of the National Environmental Policy Act, 40 CFR 1500–1508, 23 CFR 771, and the Tennessee Environmental Procedures Manual. I hereby certify that I have read and understand 23 CFR 771.117(d).

This document has been prepared by experienced, technically competent, and knowledgeable professionals. I can attest to the document's quality, accuracy, and completeness. By signing this document I am further certifying that, to the best of my knowledge, it meets the criteria for a D-List Categorical Exclusion.

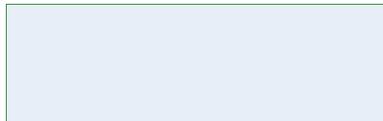
Prepared by:



05/29/2014

Ronald Jeffrey Mize, Jr. P.E.
Principal, Senior Project Manager
Consultant
865.963-4300
MizeRJ@CDMSmith.com

**Local Government
Representative Signature
(if prepared by local
government):**



mm/dd/yyyy

Name
Title
Organization
Phone
Email

TDOT Approval

The Environmental Division TDOT has reviewed the proposed project for compliance with environmental laws and regulations. This project as proposed will not involve significant impacts to planned growth, land use, or existing travel patterns. The above findings demonstrate the fact that the proposed improvements will not indirectly or cumulatively have any significant environmental impacts. Therefore; it is our recommendation that this project be classified as a D-List Categorical Exclusion under the provision of 23 CFR 771.117(d).

Reviewed by:



05/30/2014

Drew Gaskins
Senior Transportation Planner
TDOT Environmental Documentation Office

Approved by:

**Ann
Andrews**
Digitally signed by Ann Andrews
DN: cn=Ann Andrews, o=TDOT,
ou=Environmental Division,
email=ann.andrews@tn.gov, c=US
Date: 2014.06.03 12:21:49 -0500

05/30/2014

Mrs. Ann Andrews
Transportation Manager II
TDOT Environmental Documentation Office

FHWA Concurrence

Concurrence



Date 6-12-14

Ms. Leigh Ann Tribble
Environmental Program Engineer – Region 1
Federal Highway Administration

cc: TDOT Environmental Docs,
TDOT Region 1
TDOT Local Programs/STP
Mr. Ronnie Porter
City of Knoxville

Attachments