



File Code: 1950
Date: August 9, 2019

John F. Sullivan, III P.E.
Division Administrator, Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, NC 27601

Dear Mr. Sullivan,

Thank you for contacting the National Forests in North Carolina regarding the applicability of Section 4(f) of the Department of Transportation Act of 1966 to the Appalachian Development Highway System Corridor K (A-0009) project in Graham County, which has the potential to affect the Nantahala National Forest's Cheoah Ranger District. We appreciate your continued engagement and cooperation on this project.

Your Section 4(f) review determined that three management areas within the Nantahala National Forest could be affected by the proposed roadway project: 3b, 4c, and 14. Our mapping of the current alternative route corridors (referred to by the project planning team as "Improve Existing," SW-1, SW-1A, SW-2, S-2, S-6, and R-1; see attached map for reference) indicated there would be no potential impact to Management Area 3b, but there could be impacts to 4a, 4c, and 4d, as well as 14. The table below summarizes the potential overlap of management areas and routes. Of course, depending on where the road prism is placed within the 500' wide design corridors and the length of proposed tunnels, actual overlap on the ground may vary.

	Improve Existing	SW-1	SW-1A	SW-2	S-2	S-6	R-1
MA 4a			X				No direct impacts to FS property
MA 4c	X	X	X	X	X		
MA 4d	X					X	
MA 14	X	X	X	X	X	X	

We have reviewed the proposed design corridors against the criteria of Section 4(f) found in the Department of Transportation Act of 1966. After evaluating the management of the land within and adjacent to the proposed project, NFsNC concurs with your assessment that Management Area 14 (the Appalachian National Scenic Trail and its foreground) should be considered a significant park and recreation resource. Management Areas 4a, 4c, and 4d should not be considered significant park, recreation, or wildlife refuge areas. This determination was made by a responsible Federal Official's review of the Nantahala/Pisgah Forest's current Land and Resource Management Plan, which is on file at my office in Asheville, North Carolina.

I would like to note that of all the alternatives, S-6 appears to have the most negative impacts to the management areas it would traverse. It would be the most visually intrusive route from established viewpoints on the Appalachian Trail, and it would put new road prism in a management area designated to provide wildlife habitat with "freedom from disturbance from motor vehicles." It is likely to be the route that would require the most complex analysis for potential amendments to our Land and Resource Management Plan, which, as you know, we are currently in the process of revising.

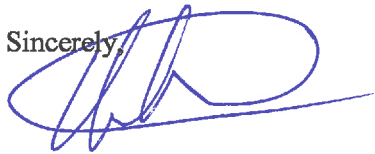


While the S-2 route seems to avoid substantial surface impacts to Forest Service lands by tunneling under Stecoah Gap, the new road template it would require on private lands north of Stecoah would still negatively impact the viewshed from the Appalachian Trail. The approach that seems to best minimize impacts to the AT viewshed and other FS resources is that of tunneling under the AT to avoid Stecoah Gap coupled with improving the existing roadway to the maximum degree possible.

Please continue to communicate your progress on alternative development and estimated timelines so that my staff can incorporate adequate time for engagement in the A-0009 project into their work plans. Once you establish which alternatives will be carried forward for detailed analysis, we will review those alternatives and determine whether Forest Plan amendments would be required for each of them and what the content of those amendments would be.

In closing, let me reiterate my appreciation for your continued coordination with the Forest and your willingness to work with us to find mutually-agreeable solutions for transportation in Western North Carolina.

Sincerely,



HURSTON A. NICHOLAS
Forest Supervisor

Enclosure: Map of the A-0009 Corridors and NFS Management Areas
cc: Ms. Wanda Austin, NCDOT Division 14 Project Manager

Attendees

Crystal Amschler (USACE)*
Monte Matthews (USACE)
Aaron Williams (FHWA)
Clarence Coleman (FHWA)
Claire Ellwanger (USFWS)*
Amy Mathis (USFS)
Amanetta Somerville (USEPA)*
Wanda Austin (NCDOT Division 14)
Josh Deyton (NCDOT Division 14)*
Dave McHenry (NCDOT Division 14)*
Amy Chapman (NCDWR)
Robert Patterson (NCDWR)
Marla Chambers (NCWRC)
Renee Gledhill-Early (NCSHPO)
Rose Bauguess (Southwestern RPO)*
Denise Nelson (NPS)*
Morgan Sommerville (ATC)
Ryan Brumfield (ARC)*
Olivia Collier (NC Dept. of Commerce)
Jacob Nelms (Graham County)*
Pam Cook (NCDOT TPB)
Jim Dunlop (NCDOT Congestion Management)
David Wasserman (NCDOT TIP)
Jamie Lancaster (NCDOT Cultural

Resources)
Matt Wilkerson (NCDOT Archaeology)*
Mary Pope Furr (NCDOT Historic Architecture)*
Jody Kuhne (NCDOT Geotechnical)
John Jamison (NCDOT EPU)
Carla Dagnino (NCDOT ECAP)*
Missy Pair (NCDOT Noise & Air)
Lucious McEachin III (NCDOT Noise & Air)
Nidhi Sheth (NCDOT Noise & Air)
Herman Huang (NCDOT Community Studies)*
Keith Pashcal (NCDOT Structures)*
Joe Furstenberg (NCDOT Bicycle and Pedestrian)*
David Hinnant (NCDOT Visualization)*
Donna Dancausse (Facilitator)
Stacy Oberhausen (TGS/NCDOT PM)
Jay Twisdale (TGS)
Randy Henegar (TGS)
JJ LaPlante (TGS)
Andrea Dvorak-Grantz (Stantec)
Mike Lindgren (Stantec)
Michael Wray (Stantec)
Melissa Ruiz (Stantec)
Amber Coleman (Stantec)
Emily Love (Stantec)
Thomas Hoppe (Stantec)
Alexa Kennedy (Stantec)

*participated via phone

Purpose: This merger meeting was scheduled to gain concurrence on Concurrence Point (CP) 1 (Purpose and Need and Study Area Defined), CP 2 (Detailed Study Alternatives Carried Forward), and CP2A (Bridging Decisions).

Project Overview: An overview of the project process and history was presented. In the NCDOT STIP, the A-0009 project has been redefined in terms of A-0009A and A-0009C. A-0009C focuses on the portion of Corridor K from Robbinsville to Stecoah. A Federal Environmental Assessment and a Finding of No Significant Impact will be prepared. A two-lane cross section with climbing lanes and passing lanes is proposed.

CP 1 Summary: Stantec provided an overview of preliminary needs and noted that the project study area and Purpose and Need were refined. Consensus was reached on the study area and the refined Purpose and Need statement as included in the revised packet. Discussion of CP1 was as follows.

CP 1 Discussion Comments and Questions:

- The project needs were discussed in two categories; physical needs and mobility needs. There are limited roadway options, steep grades, narrow lane widths, and sharp curves. There is a need for improved access to employment, medical facilities, commercial centers, and educational facilities. There is also an inability to pass slower moving vehicles over substantial distances.
- Division of Water Resources (DWR) noted that the original merger packet discussed safety in the Purpose and Need.
 - Division 14 noted that discussions with the Federal Highway Administration (FHWA) resulted in the decision to revise the Purpose and Need statement. This new statement was reflected in the revised merger packet.
- North Carolina State Historic Preservation Office (NCSHPO) noted that other merger projects typically have a more specific and measurable Purpose and Need statement and inquired whether this would set a precedent for future projects.
 - United States Army Corp of Engineers (USACE) noted coordination with FHWA and while USACE would like to see more quantifiable information, they will defer to FHWA's judgement. *[Update: USACE notes that historically when the project purpose lacks quantifiable information, they have found that it is less likely that an alternative can be eliminated by showing that that alternative does not meet the project needs through the project purpose. Rather, among the alternatives determined to be practicable (meaning available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes), the alternative "which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences" is chosen per the 404B1 guidelines.]*
 - FHWA noted that quantifiable information is not required in the Purpose and Need. FHWA stated that quantifiable measures are frequently used on capacity or congested driven projects, which A-0009C is not. They also noted that additional qualitative measures could be used to evaluate the alternatives before CP3. FHWA reiterated that they felt comfortable with the current P&N statement.
 - USACE noted this was a project-specific decision and that it will not set a precedent for future projects.
- Division 14 also noted A-0009C is not a capacity-driven project, but rather similar to a modernization project.
- United States Environmental Protection Agency (USEPA) inquired if language about modernization could be added to the purpose and need statement and noted that ultimately the team will have to look back at today's Purpose and Need statement to evaluate alternatives, rather than introducing new criteria.

- Division 14 noted adding modernization to the Purpose and Need statement would negate the new location alternatives.
- TGS noted that the team agreed upon the evaluation criteria for A-0009 they were concerned about in October 2017 that can be used to measure alternatives.
- North Carolina Division of Water Resources (NCDWR) noted that the Purpose and Need will not lend itself to eliminating an alternative.
- Southwestern Rural Planning Organization (SWRPO) inquired if more measurable screening criteria could be worked into the Purpose and Need.
 - FHWA noted that this is not required, and measurable criteria is generally included in capacity projects, which A-0009C is not.
- SWRPO noted concerns over what will determine if an alternative meets the mobility criteria better than another alternative. SWRPO inquired whether USACE would be able to approve an alternative that has greater stream impacts but meets mobility better.
 - USACE noted they look at alternatives in terms of whether they do or don't meet the Purpose and Need, not in terms of which one meets it better. USACE considers the amount and nature of impacts to all types of resources across the board.

CP 1 was signed by all team members present and sent by DocuSign to team members on the phone for their signature for the following Purpose and Need statement:

The project purpose is to provide the transportation infrastructure necessary for the well-being of local residents by improving mobility and reliability between the existing four-lane section on NC 28 at Stecoah and US 129 in Robbinsville.

CP 2 Summary: Additions/clarifications to the original merger packet were reviewed. These included revisions to the impact summary table. Stream impact numbers were revised to show total impacts from major and minor structures, and parallel impacts, where they previously only included impacts from major structures. Cultural Resources impacts were revised to To Be Determined (TBD) following coordination with NCDOT Environmental Analysis Unit - Cultural Resources.

Stantec provided an overview of design options. There were two proposed designs for Robbinsville—an improve existing alternative and a new location alternative, R-1E. The traffic analysis which is currently under development will guide what additional design work is needed to evaluate improvements that can facilitate mobility without creating business or residential impacts to downtown Robbinsville along the improve existing. Intersection and roundabout options are being evaluated for R-1E, and traffic analysis is needed to determine the appropriate intersection treatment. There were four proposed designs for Stecoah—an improve existing alternative, S-2, S-6, and SW-1A. S-2 and S-6 were developed through Quantm and presented in the Draft Design Study Report. NCDOT met with residents from the Stecoah Heights neighborhood in August 2019 who expressed opposition to S-2. FHWA received a letter from USFS expressing opposition to S-6 due to impacts to sensitive forest management areas. SW-1A was developed in response to input from

environmental advocacy groups. S-2, S-6, and SW-1A all include a tunnel under the Appalachian Trail.

Consensus was reached on carrying forward the Robbinsville Improve Existing, R-1E, Stecoah Improve Existing, S-2, and SW-1A alternatives by all members present. Consensus was reached on dropping S-6 by members present. NCSHPO was not present during consensus. USACE noted that the team could go ahead and sign with the understanding that cultural resources information would be considered new information and that CP 2 would be revisited in that case. FHWA also agreed to move forward as long as the Core Team coordinated with NCSHPO on the S-6 alternative.

CP 2 Discussion Comments and Questions:

- USACE inquired whether R-1E crosses the Trail of Tears.
 - It was noted R-1E crosses the Trail of Tears, as the Trail of Tears crosses the existing US 129 in the vicinity of its intersection with Five Point Road.
- NCSHPO noted they would not be able to sign CP 2 because the Cultural Resources information has not been completed and it is critical information for their decision. NCSHPO is willing to reconsider when that information is available.
 - USACE inquired about what Section 4(f) resources are present.
 - NCSHPO noted that the Appalachian Trail and Trail of Tears are present resources, but they are waiting for information about other resources that may be present. Mitigation is not an option for building and landscape resources.
 - TGS/NCDOT PM noted that all Stecoah alternatives impact the Appalachian Trail viewshed and some have worse visual impacts than others.
- USFS noted S-6 impacts their most restrictive management area and is the most intrusive to the Appalachian Trail visual field. It would be very difficult for USFS to permit S-6.
- NCDWR inquired how S-6 would be eliminated based on Purpose and Need.
 - TGS noted it would be eliminated based on impacts, not on Purpose and Need.
 - USACE noted that it uses practicability, impacts across the board, and Purpose and Need to eliminate alternatives at this point.
- USACE noted they would be okay eliminating S-6 at this point, but still recommend S-2 to move forward.
 - NCDWR, USFS, North Carolina Wildlife Resources Commission (NCWRC), United States Fish and Wildlife Service (USFWS), USEPA, SWRPO, and FHWA agreed with eliminating S-6.
 - NCWRC, NCDWR, NCDOT Historic Architecture, and USEPA noted agreement with carrying S-2 forward.
- USFWS noted that S-6 is the most impactful to known listed species.
- SWRPO noted that Graham County officials did like some aspects of S-6, but they are fine with eliminating it and moving forward.
- USFWS noted the northern portion of S-2 overlaps with a maternity roost buffer for the

Indiana bat, but S-6 is more impactful due to impacts to the Northern Long Eared Bat.

- Appalachian Trail Conservancy (ATC) noted that SW-1A and Improve Existing are their two preferred alternatives. S-2 is okay from their perspective, but there are concerns over residential impacts with this alternative. SW-1A has the least visual impacts to the Appalachian Trail.
 - TGS noted that suitable replacement housing is difficult to find in this area.
- USFS noted their preference for SW-1A.
- USACE inquired about tribal resources information.
 - FHWA noted their coordination with tribal groups. Known resources are the Trail of Tears and removal points near Robbinsville.
 - NCDOT Archaeology noted that TRC is completing archaeological work and will be completing a management summary for archaeological resources.
- NCDOT Historic Architecture noted that S-6 may be brought back in if new cultural resources information shows that it's favorable.
- NCWRC inquired whether S-2 will continue to be evaluated.
 - TGS noted that S-2 would be carried through design and presented at CP 3.
- USACE noted the concurrence forms needed to be revised to include a No Build option.
- USACE noted that eliminating alternatives outside of the study area that are part of a separate project do not affect the current project. Alternatives T-1 and T-4 from the Draft Design Study Report are considered a separate project.

CP 2A Summary : TGS provided an overview of recommendations for major hydraulic structures. This was intended for informational purposes only, with concurrence expected later. Structures for S-6 were not presented with the understanding S-6 has been eliminated from detailed study. Should new information be received which changes this elimination determination, structures for S-6 will need to be evaluated with the merger team to make a CP 2A decision.

CP 2A Discussion Comments and Questions:

- NCWRC raised concerns about retaining the Reinforced Concrete Box Culvert (RCBC) proposed at Map ID 2. NCWRC noted that all four barrels appeared to be carrying the base flow, which is not ideal, and that these structures need to be designed with big storms and floods in mind. NCWRC inquired whether the width of the stream warrants four barrels and noted that if so, a bridge would be more appropriate.
 - TGS noted that the upstream channel is close to the same width of the proposed structure, the culvert is in great shape, and the structure is adequately designed to handle a 50-year storm event. TGS is open to potentially incorporating seals and baffles during final design, if they are warranted based on current NCDOT guidance.
 - USACE is okay with retaining the existing structure, but wants documentation as to why that decision was made.
- NCWRC raised similar concerns about the proposed RCBC at Map ID 3.

- TGS noted that this structure is adequately sized, and the leftmost barrel and half of the middle barrel carry the low flow.
- NCWRC noted there were no concerns with Map ID 6 if the structure closely matches the channel width.
 - TGS noted that the structure is adequately sized and low flow is conveyed in the right barrel looking downstream.
- NCWRC inquired if the flow for the proposed Reinforced Concrete Pipe (RCP) at Map ID 7 will be carried in one of the three pipes and recommended that two of the pipes be raised.
 - TGS noted the flow would be carried in one of the pipes.
- USACE noted their agreement with the proposed structures if they match the stream width. *[Update: USACE notes should new information be received indicating the proposed culvert size would change the pre-construction stream widths or split flow at a structure where flow wasn't previously split or otherwise could be confined to a single culvert, culvert sizes may need to be re-evaluated.]*
 - TGS noted the stream widths were considered when developing structure recommendations.
- USACE inquired why a culvert was proposed for Map ID 8 as opposed to a bridge.
 - TGS noted that low flow is conveyed in all three pipes and the cost for a bridge at this location could be around \$1,000,000.
- NCDWR inquired if the angle of the existing crossing at Map ID 10 would be fixed.
 - TGS noted there may be a little adjustment, but the cross section reflected in the pictures is a typical cross-section of Sweetwater Creek.
- USACE inquired about the structure further upstream in the picture on Map ID 14.
 - TGS noted that there is no current structure at this new location site, but there is an existing pipe just upstream currently under NC 143 and any improvements to this existing structure will be up to NCDOT most likely as a pipe replacement maintenance action item when deemed necessary.
- NCWRC noted that the perch needs to be corrected at Map IDs 21 and 22.
 - TGS noted that the proposed structures would be buried appropriate to eliminate the perch condition that is visible at each of these existing structures.
- USACE inquired about the need for Map ID 26.
 - TGS explained the drainage area was just under 100 acres so decision was reached to include this site. Consideration to potentially drop this site will be further evaluated.
- NCWRC noted that wildlife crossings need to be considered. NCDOT maintenance crews may have information on areas with high numbers of roadkill. Culverts need to be sized for larger animals, like bear, deer, and elk, to cross.
- USACE noted the need for documentation to show why culvert impacts are justified to a bridge at wider locations. Costs are an acceptable justification, but this information needs to be presented at CP 2A.
- USACE noted the need to clarify what structures are driven by roadway in the hydraulics recommendation table.

Action Items:

- The A-0009C Core Team will use the criteria described in the needs summary of the Merger meeting packet, in addition to the human, cultural and environmental evaluation factors to support alternative evaluation. Examples could include qualitative criteria to improve steep grades, narrow lane widths, sharp curves, and number or length of passing lanes.
 - Note: The evaluation factors used in the Preliminary Impact Summary Matrix were identified and agreed upon in 2015.
- FHWA will coordinate with NCSHPO on decisions made during CP 2.
- FHWA will share USFS Letter on Stecoah alternatives with merger team members.
- USFWS and the A-0009C Core Team will begin coordination concerning Section 7. USFWS noted that depending on the alternatives, there is the chance to perform avoidance and minimization measures to obtain a Not Like to Adversely Affect biological conclusion.
- TGS will send the updated schedule to merger team members.

This summary is the writer's interpretation of the events, discussions, and transactions that took place during the meeting. Meeting participants are asked to provide any edits, additions and/or corrections to the A-0009C Core Team by November 1, 2019.

NEPA/404 MERGER TEAM MEETING AGREEMENT
Concurrence Point No. 1: Purpose and Need and Study Area Defined

PROJECT NO./FA NO./STIP NO./ NAME/DESCRIPTION:

WBS Element: 32572.1.FS10

FA No. APD-0074(178)

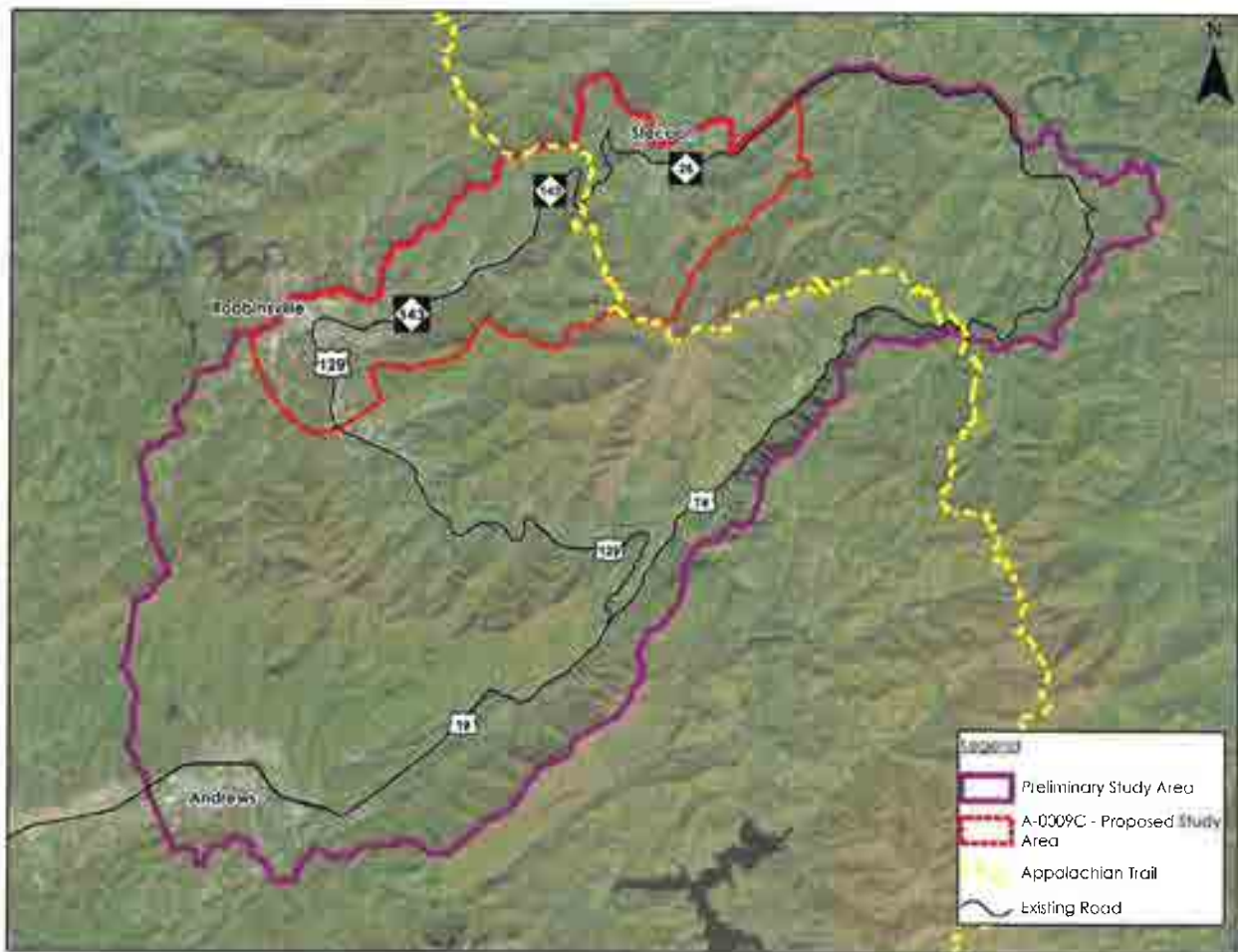
STIP Project Number: A-0009C

STIP Description: Corridor K Improvements along US 129, NC 143, and NC 28 from Robbinsville to Stecoah

Purpose and Need Statement: On this date of October 9, 2019, the Merger Team concurred on the following Purpose and Need Statement:

“The project purpose is to provide the transportation infrastructure necessary for the well-being of local residents by improving mobility and reliability between the existing four-lane section on N.C. 28 at Stecoah and U.S. 129 in Robbinsville”

Study Area: The proposed refined study area boundary is shown below.



USACE DocuSigned by: Crystal Amschler 10/9/2019
66C05A077D234BC... Crystal Amschler Date

USFWS DocuSigned by: Claire Ellwanger 10/11/2019
8489BB0BFB7B45D... Claire Ellwanger Date

USFS Amy Mathis _____ Date

RPO DocuSigned by: Rose Bauguess 10/14/2019
261D8411F03544C... Rose Bauguess Date

FHWA Aaron T. Williams 10-9-19
Aaron Williams Date

NCDWR Amy Chapman 10/9/19
Chapman Date

NCWRC Marla Chambers 10/9/2019
Marla Chambers Date

SHPO Renee Gledhill-Earley 10-9-19
Renee Gledhill-Earley Date

USEPA DocuSigned by: Amanetta Somerville 10/9/2019
4A37089ED457408... Amanetta Somerville Date

NCDOT Wanda H. Austin 10-9-19
Wanda Austin Date

NEPA/404 MERGER TEAM MEETING AGREEMENT

Concurrence Point No. 2: Design Options for Detailed Study

PROJECT NO./FA NO./STIP NO./ NAME/DESCRIPTION:

WBS Element: 32572.1.FS10

FA No. APD-0074(178)

STIP Project Number: A-0009C

STIP Description: Corridor K Improvements along US 129, NC 143, and NC 28 from Robbinsville to Stecoah

The Merger Team concurred on this date of October 9, 2019, that the following alternatives be carried forward for detailed study.

- Improve Existing US 129/NC 143** – This option would maintain the existing alignment along US 129 and NC 143 between each road's intersection with Five Points Road. After the traffic analysis is completed, additional design work will be conducted in the Robbinsville area along existing US 129 and NC 143 to evaluate improvements that can facilitate mobility without creating business or residential relocations to the downtown Robbinsville area. The improve existing option may encroach on commercial parking along existing routes; however, the design will be developed to avoid relocations.
- R-1E** – This design option would provide a new location connection along the Five Points Road corridor to facilitate through movements. New intersections with US 129 and NC 143 are being studied including conventional T-intersections and roundabouts. Additional design work will be performed after the traffic analysis is completed.
- Improve Existing NC 143/NC 28** – Improvements including widening, providing adequate shoulders, passing and climbing lanes, and modifying superelevations (cross-slopes) to improve traffic flow along existing NC 143 and NC 28.
- S-2** – Originates at Five Point Road and NC 143 for an improve existing segment, continuing north and tunneling under NC 143 and the Appalachian Trail for 4,445 feet. The corridor then crosses NC 28 and NC 143 south of the existing intersection, turning northeast and following the north side of the Stecoah Valley before an improve existing segment and terminating at the at the four-lane section of NC 28.
- S-6** – Originates at Five Point Road and NC 143 for an improve existing segment, turning east at Stillhouse Branch and tunneling under NC 143 and the Appalachian Trail for 3,263 feet. The corridor then runs westward the corridor parallels Cody Branch before turning northward following the south side of the Stecoah Valley and terminating at the four-lane section of NC 28.
- SW-1A** – Originates at Five Point Road and NC 143 for an improve existing segment, continuing north and tunneling under NC 143 and the Appalachian Trail for 5,416 feet. The corridor includes an a-grade intersection of NC 28 and NC 143 before turning south where the remainder of the corridor improves existing NC 28, terminating at the at the four-lane section of NC 28.

No Build

USACE	DocuSigned by: <u>Crystal Amschler</u> 66C05A077D234BC...	10/9/2019 Date	NCDWR	<u>Amy Chapman</u> Amy Chapman	10/9/19 Date
USFWS	DocuSigned by: <u>Claire Ellwanger</u> 8489BB0BF7B45D...	10/11/2019 Date	NCWRC	<u>Marla Chambers</u> Marla Chambers	10/9/2019 Date
USFS	<u>Amy Mathis</u> Date		SHPO	<u>Renee Gledhill-Earley</u> Date	
RPO	DocuSigned by: <u>Rose Bauguess</u> 261D8411F03544C...	10/14/2019 Date	USEPA	DocuSigned by: <u>Amanetta Somerville</u> 4A37089ED457408...	10/9/2019 Date
FHWA	<u>Aaron T. Williams</u> Aaron Williams	10-9-19 Date	NCDOT	<u>Wanda H. Austin</u> Wanda Austin	10-9-19 Date



North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office

Ramona M. Barros, Administrator

Governor Roy Cooper
Secretary Sair H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

October 18, 2019.

MEMORANDUM

To: Aaron Williams, FHWA aaron.williams@dot.gov
Wanda Austin, NCDOT whaustin@ncdot.gov
Crystal Amschler, USACE crystal.c.amschler@usace.army.mil

From: Renee Gledhill-Earley 
Environmental Review Coordinator

RE: A-0009C, Corridor K Improvements along US 129, NC143 and NC 28 from Robbinsville to Stecoah, Graham County, ER 19-2538

This memorandum is to follow up on my comments at the NEPA/404 Merger Team meeting for the above-referenced undertaking on October 9, 2019. The purpose of the meeting was to obtain concurrence on the project's purpose and need, study area, and detailed study alternatives (Concurrence Points 1 and 2) as well as bridging decisions (Concurrence Point 2A).

As all the team members would likely agree, this is a project with a long and complex history. It has resulted in new ways of looking at projects and working together towards a successful resolution to provide much needed transportation improvements to the region. It has been, as I described it in the meeting, "precedent setting" and a project that when completed, I believe we can take pride in having worked on together.

It is because it is precedent setting that I raised the question about the newly proposed "Purpose and Need Statement." I was especially struck by the absence of measures to determine that the needs outlined for the project will have been met on its completion and whether this would set a precedent for formulating future projects' purpose and need statements. However, following a very informative discussion by the team and, especially Aaron William's explanation that FHWA does not require such measures, I willingly signed the Purpose and Needs Statement/ Concurrence Point 1 as presented in the meeting's notice/outline.

This is not the case with Concurrence Point 2 that requires agreement on the study area and what alternatives will be carried forward for detailed study. Minus any information on what properties in the areas of the several alternatives are or may be historic, I do not believe it appropriate to eliminate alternatives at this point. The reason for this is that as a federal aid project subject, not only to Section 106 of the National Historic Preservation Act, but also to Section 4(f) of the Department of Transportation Act, it may not "use" a historic property, unless there are no feasible and prudent alternatives to its use.

As the core team members know, the historic structures survey was only completed in September and we have not yet met to determine which of the surveyed properties need additional evaluation, in a written report, to

determine their National Register-eligibility. The meeting to make the cuts for evaluation is scheduled on October 23, 2019. Minus the information from that meeting and recognizing that most of the surveyed properties are along the existing corridor, eliminating alternatives at this point could result in the project's planning getting to a point where additional alternatives will require study. Such a delay will not only add time to the project, it could create misunderstanding among the local governments and public.

The lack of information about eligible archaeological sites or sites important to the Tribes is also a concern. While archaeological sites are often subjected to data recovery as a means of mitigation that allows FHWA to make a de minimis finding under Section 4(f), there is not yet enough information about the presence or absence sites within the several alternatives to ensure that they will not be harmed or that the Tribes would not object to their use. Thus, eliminating alternatives minus that information appears premature.

I understand that as the merger team leaders you must weigh your agencies' responsibilities under the applicable federal laws and decide the pros and cons of the situation, including potential litigation. What I would hope is that a final decision on Concurrence Point 2 can wait until after the October 23rd meeting and receipt of additional archaeological information so that we all have a better understanding of the potential risks of moving forward with eliminating current alternatives from detailed study. If a decision on Concurrence Point 2 cannot be delayed, the State Historic Preservation Office will abstain from this merger point.

Thank you for your time and consideration of this important and complex matter.

cc:	Jamie Lancaster, NCDOT/EAU	jlancaster@ncdot.gov
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	Stacy Oberhausen, TGS	Soberhausen@tgsengineers.com
	Amy Sackaroff, Stantec	amy.sackaroff@stantec.com

Attendees

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Wanda Austin (NCDOT Division 14)*

Dave McHenry (NCDOT Division 14)*

Adam Dockery (NCDOT Division 14)*

Amy Chapman (NCDWR)

Robert Patterson (NCDWR)

Kevin Mitchell (NCDWR)*

Marla Chambers (NCWRC)

Renee Gledhill-Early (NCSHPO)*

Rose Bauguess (Southwestern RPO)*

Becky Garland (Graham County)*

Gary Sneed (EBCI)*

Derek Tahquette (EBCI)*

Robert Wilcox (EBCI DOT)*

Jonathan Moore (NCDOT Hydraulics)

Marc Shown (NCDOT Hydraulics)

Roger Castillo (NCDOT TPB)*

Jody Kuhne (NCDOT Geotechnical)*

John Jamison (NCDOT EPU)

Mike Sanderson (NCDOT EPU)

Carla Dagnino (NCDOT ECAP)

Ben Williamson (NCDOT EAU)

David Hinnant (NCDOT Visualization)

Matthew Nolfo (NCDOT)

Donna Dancausse (Facilitator)

Stacy Oberhausen (TGS/NCDOT PM)

Jay Twisdale (TGS)

Randy Henegar (TGS)

JJ LaPlante (TGS)

Amy Sackaroff (Stantec)

Mike Lindgren (Stantec)

Amber Coleman (Stantec)

Emily Love (Stantec)

Thomas Hoppe (Stantec)

Alexa Kennedy (Stantec)

*participated via phone

Purpose: This merger meeting was scheduled to gain concurrence on Concurrence Point (CP) 2A (Bridging Decisions and Alignment Review).

Work in Progress:

- Stantec noted that the team was in the process of refining designs to incorporate geotechnical recommendations (i.e., slopes, retaining walls) and was finalizing designs for: the section of the Improve Existing Option at the Appalachian Trail; Robbinsville options; the NC 143/NC 28 Intersection, and NC 28 at the Bill Crisp Road/Stecoah Road Intersection. It was explained that the team is analyzing intersection treatments at NC 143 and NC 28, as a result of coordination with the environmental advocacy stakeholder group and a meeting between the Stecoah Heights community and NCDOT. Stantec stated this resulted in a new hydraulic crossing, Map ID 27, which would be presented later in the meeting. It was noted that the design refinements are being developed in coordination with local officials and as such the team is coordinating reviews of the design refinements with Graham County Commissioners meetings.

Parking Lot Items: Stantec presented an overview of parking lot items, noting that there had been a few recent requests for additional information, including a hydrologic evaluation of streams over proposed tunnels, wildlife passages, and acidic rock. It was noted that these subjects would be investigated and discussed at future project team meetings.

Division of Water Resources (DWR) inquired when merger meetings 4B and 4C would be scheduled. Division 14 noted that would be at least six months in the future and would occur after the completion of the FONSI.

CP 2A Summary: TGS Hydraulics provided an overview of recommendations for major hydraulic sites. Map IDs 11-13 and 16-19 were not included as these structures were only present on Alternative S-6, which was eliminated at CP 2. Map ID 27 is an additional site that was not presented at the previous merger meeting. The merger team determined that Map ID 1 will be dropped in favor of Map ID 1A and Map ID 1B. Bridge and culvert extension options will be carried forward for Map IDs 2, 8, and 27. Baffles will be evaluated for each box culvert site prior to CP 4B.

Map ID 1: The existing structure is a 54-foot bridge on Five Point Road over Tulula Creek.

Map ID 1 was presented with a bridge crossing of 600 feet and TGS Hydraulics noted that a bridge under 200 feet could be proposed at this site (Map ID 1A) due to preliminary modeling.

Map ID 1B is located at a narrower crossing of Tulula Creek south of Map ID 1, which would minimize impacts to the floodplain. A 125-foot bridge is proposed at this location.

- North Carolina Wildlife Resources Commission (NCWRC) inquired about the number of bridges being proposed at this location
 - TGS Hydraulics noted that two scenarios are being examined for Map ID 1: either the existing Bridge 20 will be replaced (Map ID 1A) or a new bridge will be constructed further south (Map ID 1B).
- NCWRC noted this would require a longer, new location road.
 - TGS Hydraulics confirmed and noted that the intent is to minimize impacts to the floodplain.
 - The proposed refined R-1E alignment associated with Map ID 1B will utilize as many existing roads a practicable.
- United States Army Corp of Engineers (USACE) inquired which designs would be carried forward for CP2A decisions. USACE noted there are no stream or wetland impacts at this location and the driving factor for the long bridge was the floodplain.
- ***The merger team agreed to carry both Map ID 1A and 1B bridging options forward.***

Map ID 2: The existing structure is a 4 @ 12'x12' Reinforced Concrete Box Culvert (RCBC) on NC 143 (Sweetwater Road) over Tulula Creek.

- NCWRC inquired how often the current crossing needs to be cleared for woody debris.
 - TGS Hydraulics noted that NCDOT Division 14 Maintenance staff have confirmed there has not been a need for regular debris maintenance at this site nor at any of the other existing box culvert sites within the project area.

- NCWRC noted it is undesirable to split the stream into four barrels.
- TGS Hydraulics noted that the channel width is essentially the same width of the existing structure.
- USACE noted in 2007 the merger team agreed upon a bridge at this location and inquired why a culvert extension was being recommended now, especially since the costs for a bridge and culvert are similar.
 - TGS Hydraulics noted that the culvert extension costs include stream mitigations costs at a 2:1 ratio, whereas the bridges costs only reflect the cost of the structure.
 - USACE and DWR noted that total costs should be included for comparison purposes, including detour structure and alignments when applicable.
 - DWR noted Tulula Creek is a healthy stream and previous aquatic benthic monitoring conducted in 2007 indicated a healthy macroinvertebrate presence, which would support the need for a bridge at this site.
 - TGS Hydraulics noted the health of the stream has not been negatively affected by the existing 4-barrel culvert.
 - TGS/NCDOT PM noted the proposed cross section is different from the 2007 cross section which included four lanes. The Core Team believes that past information could be relevant to help the current process, but in accord with the agreement made in July 2015 to restart the project with a fresh perspective past decisions will not be carried forward without appropriate evaluations
- USACE noted the upstream and downstream crossings are bridges and they would not be comfortable agreeing to a culvert extension at this time as a bridge would minimize overall stream impacts.
 - TGS Hydraulics noted that the bridge upstream is due to FEMA regulations.
- TGS Hydraulics inquired whether NCDOT would get stream mitigation credit removing the existing box culvert.
 - USACE noted they would consider this a positive avoidance/minimization measure, but credit is unlikely.
- USACE noted that a bridge has hydraulic benefits related to flow and that it's more desirable to have a stream flow through a single channel.
- DWR noted Cheoah River is a trout stream.
- Division 14 noted they would need a valid reason to change the current conditions from a culvert to a bridge at the site. If a bridge proved to be a betterment or provided a higher quality stream, they would be more inclined to propose a bridge, but as it stands, the stream is functioning as a high-quality stream with the current culvert.
- USACE proposed retaining both the bridge and culvert extension options and reevaluating the site at CP3/CP 4A once more information is available. USACE requested more information on costs, reasons for the 2007 bridging decision, and why there is not be a bridge at this site even though there are bridges upstream and downstream.
 - TGS/NCDOT PM inquired whether the merger team was agreeable to moving forward with both a bridge and culvert extension option at this site
 - NCWRC noted agreement but would have a hard time being convinced to extend the culvert here.
 - Division 14 also noted agreement carrying both options forward for further consideration.

- TGS Hydraulics noted if a bridge was constructed here, there would be additional impacts to the surroundings businesses.
- NCWRC noted that a bridge would provide a safer situation by allowing wildlife to pass underneath.
 - TGS/NCDOT PM noted they have been working with United States Forest Service (USFS) to determine which locations would be best for wildlife passages.
- **The merger team agreed to carry both the culvert extension and bridging options forward.**

Map ID 3: The existing structure is a 3 @ 12'x9' RCBC on NC 143 (Sweetwater Road) over Sweetwater Creek.

- NCWRC inquired about retaining a bridge for this site.
 - TGS Hydraulics noted to construct a bridge, Old Sweetwater Road (SR 1277) would need to be realigned, which would require an additional bridge crossing and an on-site detour bridge. The realignment would impact at least two additional businesses and would be a significant challenge.
- NCWRC inquired about moving Old Sweetwater Road to the east.
 - TGS Hydraulics noted this would relocate at least two businesses.
- USACE noted they were more comfortable with extending the existing culvert at this site versus Map ID 2, and they recognized the logistical issues with relocating Old Sweetwater Road. USACE also stated, if it's determined the culvert requires replacement, this would be considered new information and the bridging decision would need to be revisited.
- NCWRC recognized the logistical difficulties but noted they don't like keeping an undesirable situation. Splitting the base flow of the stream hinders fish passage and it would be preferable to get down to one barrel.
 - TGS Hydraulics noted the flow is currently conveyed through 1.5 barrels.
- NCWRC inquired whether sills and baffles could be evaluated here.
 - TGS Hydraulics noted they would be evaluated.
- NCWRC inquired about the channel width.
 - TGS responded it has an approximately base width of approximately 18 feet at the face and 24 feet base width upstream with an average channel width of 24 feet.
- **The merger team agreed to retain and extend the existing 3 @ 12'x9' RCBC.**

Map ID 4: The existing structure is a 54" CSP with headwalls on NC 143 (Sweetwater Road) over Sweetwater Creek Tributary SI.

- NCWRC inquired about the width of the stream.
 - TGS Hydraulics noted the stream width is approximately 5-6 feet and that it matches the width of the existing pipe. *[Update: Further review of field notes indicates a base width of approximately 4 feet.]*
- **The merger team agreed to a single 6'x7' RCBC.**

Map ID 5: The existing structure is a 66" CSP with headwalls on NC 143 (Sweetwater Road) over Slay Bacon Branch.

- NCWRC inquired about the width of the stream.

- TGS Hydraulics noted the stream width is 6 feet and that it matches the proposed structure with a channel width of approximately 6 feet.
- USACE inquired if stream width was considered for all of the structures.
 - TGS Hydraulics stated that stream width is considered for each structure and it will one of the considerations during final design.
- **The merger team agreed to a single 7'x8' RCBC.**

Map ID 6: The existing structure is a 3 @ 11'x9' RCBC on NC 143 (Sweetwater Road) over Sweetwater Creek.

- NCWRC inquired about the width of the stream.
 - TGS Hydraulics noted that is approximately 15 feet.

Map ID 7: The existing structure is a 54" CSP with headwalls on NC 143 (Sweetwater Road) over Harwood Branch.

- NCWRC inquired if the existing pipe would be replaced or extended.
 - TGS Hydraulics noted that it would be replaced.
- NCWRC inquired about the width of the stream.
 - TGS Hydraulics noted that is approximately 6 feet.
- **The merger team agreed to a single 54" RCP and a double 48" RCP.**

Map ID 8: The existing structure is a 3 @ 72" CSP with brick headwalls and end walls on NC 143 (Sweetwater Road) over Beech Creek.

- DWR noted they would like to see a bridge considered for this crossing as it would be healthier for the flow of the stream. The current structure carries the stream flow in all three barrels.
 - NCWRC and USACE agreed.
 - Division 14 concurred with carrying a bridge option forward but would like more information before making a final decision.
- Division 14 inquired if the elevation would be high enough for a bridge without causing the channel to widen out.
 - TGS Hydraulics noted it would be challenging to make a bridge hydraulically feasible at this site.
 - Division 14 stated they have constructed bridges in similar situations, and this has caused a lot of aggregation downstream.
- TGS Hydraulics noted that the stream immediately below the outlet is much smaller than the width of the three existing structures.
- USACE noted there were smaller bridges downstream, and that a bridge was chosen for this location during the previous 2007 CP2A meeting. USACE requested NCDOT address why a bridge was appropriate during the 2007 decision but not at this time.
 - TGS Hydraulics stated most of these smaller bridges are located on private drives or access roads and not constructed to the same standards as NCDOT roadway crossings.
- NCWRC inquired about the width of the stream.
 - TGS Hydraulics noted that is approximately 18 feet
- **The merger team agreed to carry culvert extension and bridging option forward.**

Map ID 9: The existing structure is a 48" CSP under NC 143 (Sweetwater Road) over Sweetwater Creek Tributary SAD.

- NCWRC inquired if the base flow would only go through the 54" pipe.
 - TGS Hydraulics noted this was correct.
- NCWRC inquired about the width of the stream.
 - TGS Hydraulics noted that is approximately 4 feet.
- ***The merger team agreed to a single 54" RCP and a double 48" RCP.***

Map ID 10: The existing structure is a 72" CSP with brick headwalls and end walls on NC 143 (Sweetwater Road) over Sweetwater Creek.

- NCWRC noted this site may require alternating baffles.
- NCWRC inquired about the width of the stream.
 - TGS Hydraulics noted that is approximately 4 feet.
- ***The merger team agreed to a single 8'x9' RCBC.***

Map ID 14: There is no existing structure at this site.

- NCWRC noted this site may require baffles.
- EBCI inquired if this site was on EBCI land.
 - FHWA stated that the team will verify and follow-up with EBCI.
 - *[Update: This site does not fall on EBCI land].*
- NCWRC inquired about the width of the stream.
 - TGS Hydraulics noted the width is approximately 3 feet.
- ***The merger team agreed to a single 6'x7' RCBC.***

Map ID 15: There is no existing structure at this site.

- NCWRC inquired about the endpoint of the culvert and whether width would be minimized. NCWRC noted this was a long structure at 129 feet.
 - TGS Hydraulics noted the structure ends at the slope stakes boundary and that width would be minimized.
- EBCI inquired if this site was on trust land.
 - FHWA noted that the team will verify and follow-up with EBCI.
 - *[Update: This site falls on an EBCI tribal land holding.]*
- NCWRC inquired about the width of the stream.
 - TGS Hydraulics noted that is approximately 6 feet.
- ***The merger team agreed to a single 6'x7' RCBC.***

Map ID 20: There is no existing structure at this site. The proposed structure is driven by roadway design including serving as a grade separation structure for NC 28 and not hydraulic requirements.

- ***The merger team agreed to a bridge.***

Map ID 21: The existing structure is a 6'x6' RCBC on NC 28 over Carver Branch.

- NCWRC inquired about the width of the stream.
 - TGS Hydraulics noted the stream has a 6 feet channel base width.

- ***The merger team agreed to a single 7'x8' RCBC.***

Map ID 22: The existing structure is a 48" CMP on NC 28 over Carver Branch Tributary SBJ.

- NCWRC noted this site might require baffles.
- NCWRC inquired about the width of the stream.
 - TGS Hydraulics noted that is approximately 3 feet.
- ***The merger team agreed to a single 6'x7' RCBC.***

Map ID 23: There is no existing structure at this site. The proposed structure is driven by roadway design and not hydraulic requirements.

- ***The merger team agreed to a bridge.***

Map ID 24: The existing structure is a 66" CMP on NC 28 over Edwards Branch.

- NCWRC inquired about the width of the stream.
 - TGS Hydraulics noted that is approximately 4 feet.
- ***The merger team agreed to a single 6'x7' RCBC.***

Map ID 25: The existing structure is a 3 @ 10'x9' RCBC on NC 28 over Stecoah Creek.

- NCWRC inquired whether stream linear feet impacts only include bank stabilization.
 - TGS Hydraulics noted that the stream impacts were calculated based on slope stakes and a 35-foot buffer, consistent with the impact matrix shown at CP 1 and 2. There will likely be minimal impacts, but calculations assume worst-case scenario.
- NCWRC inquired about how many barrels the stream would use and noted preference to use one barrel.
 - TGS Hydraulics noted the stream is currently using approximately 1 $\frac{1}{3}$ barrels.
- NCWRC 14 inquired about the width of the stream.
 - TGS Hydraulics noted the width is 12 feet and matches one of the barrels. The stream has adjusted itself to the structure.
- ***The merger team agreed to retain the existing 3 @ 12'x9' RCBC.***

Map ID 26: The existing structure is a 60" CMP on NC 28 over Stecoah Creek Tributary SDT.

- NCWRC inquired how the 13-foot stream would fit in a 60" pipe. NCWRC noted the need to maintain the channel width and that they would be fine with a bench in the culvert to narrow the stream.
 - TGS Hydraulics noted that the stream contains a lot of cobbles with shallow flow.
 - After revisiting their notes, TGS Hydraulics has determined that 6 feet is a more reasonable estimate for this crossing.
- ***The merger team agreed to a single 6'x7' RCBC.***

Map ID 27: There is no existing structure at this site.

- DWR inquired if a bridge was possible at this crossing as the culvert was large.
 - NCWRC agreed the proposed culvert is a large structure.

- USACE noted the high costs and impacts, and more information for a proposed bridge was needed at this site.
 - DWR agreed.
- TGS Hydraulics noted there would be an opportunity to reduce the culvert length at CP 4A and the stream impacts accounted for surrounding tributaries.
- TGS Hydraulics noted there would be a challenge with a bridge at this site due to the proposed connection to tie the remaining portion of NC 28 to this new location route.
 - DWR noted this needed to be documented at CP 4A.
- Division 14 noted a concern over the intersection close to the bridge and requested Stantec assess moving the intersection.
- Division 14 concurred with carrying both culvert and bridge options forward for this site to be re-evaluated once more information is available.
- NCWRC inquired about the width of the stream.
 - Due to the recent addition of this crossing, TGS Hydraulics will need to provide the existing base width after making an additional field visit to review this crossing in the field.
- **The merger team agreed to carry culvert and bridging options forward.**

General Discussion:

- USACE noted if it's determined a culvert needs to be replaced where a culvert extension is currently proposed, this would be considered new information and the site would need to be revisited.
- USACE noted they do not want to blast bedrock in order to bury a culvert.
- NCWRC noted they consider bridges as wildlife crossings as long as there is room for wildlife to cross underneath properly. NCWRC noted that Map ID 8 appears to be the only site in the middle of the project where a potential bridge is being considered.
 - TGS/NCDOT PM noted they are working to obtain data related to wildlife crossings and where/if a crossing would be appropriate.
 - TGS Hydraulics noted that Map IDs 20 and 23 include long bridges on the opposite side of the mountain which will accommodate a wildlife passage.
- TGS/NCDOT PM noted there will be an informational team meeting in early January to walk through the environmental document.
- USACE noted a Merger Application should be submitted six weeks prior to the public hearing so that they could put out a public notice.

Action Items:

- TGS Hydraulics to gather additional information on bridge and culvert options at Map IDs 2, 8, and 27.
- Stantec to assess shifting the intersection at Map ID 27.
- TGS to confirm Map ID 27 stream width in the field.
- The A-0009C Core Team to schedule a project team meeting in early January.

This summary is the writer's interpretation of the events, discussions, and transactions that took place during the meeting. Meeting participants are asked to provide any edits, additions and/or corrections to the A-0009C Core Team by December 16, 2019.

NEPA/404 MERGER TEAM MEETING AGREEMENT

Concurrence Point No. 2A: Alignment Review and Bridging Decisions

PROJECT NO./FA NO./STIP NO./ NAME/DESCRIPTION:

WBS Element: 32572.1.FS10

FA No. APD-0074(178)

STIP Project Number: A-0009C

STIP Description: Corridor K Improvements along US 129, NC 143, and NC 28 from Robbinsville to Stecoah

The Project Team concurred on this date of November 20, 2019, and reached concurrence on bridging decisions for the proposed improvements as shown in the attached table.

USACE DocuSigned by: Crystal Amschler 11/22/2019 Date

NCDWR DocuSigned by: Amy Chapman 11/22/2019 Date

USFWS DocuSigned by: Claire Ellwanger 11/21/2019 Date

NCWRC DocuSigned by: Marla Chambers 11/22/2019 Date

USFS Amy Mathis Date

SHPO DocuSigned by: Renee Gledhill-Earley 11/22/2019 Date

RPO DocuSigned by: Rose Bauguess 11/25/2019 Date

USEPA DocuSigned by: Amanetta Somerville 11/21/2019 Date

FHWA DocuSigned by: Aaron T. Williams 11/21/2019 Date

NCDOT DocuSigned by: Wanda Austin 11/21/2019 Date

MAP ID	ROUTE	LAT	LONG	STREAM/WETLAND ID	STREAM NAME	FEMA STUDY TYPE	DRAINAGE AREA (Mi ²)	DRAINAGE AREA (ac.)	EXISTING STRUCTURE	MIN. RECOMMENDED STRUCTURE	STREAM IMPACTS (ft.) w/ 35' Offset	STREAM CLASS	WETLAND IMPACTS (ac.)	APPLICABLE ALTERNATIVES					
									Number, Size, Structure Type	Number, Size, Structure Type				Improve Existing Robbinsville	R-1E	Improve Existing Stecoah	S-2	SW-1A	
1	Five Point Rd	35.32082	-83.80201	1016258	Tulula Creek	Detailed	28.6	-	Br 20 / 370020, Length = 54.0'	Bridge 620'	0	WS-III; Tr	-		X				
1A										Bridge < 200'									
1B	-	35.31712	-83.800061	1016258	Tulula Creek	Detailed	28.4	-	-	Bridge 125'	0	WS-III; Tr	-		X				
2	NC 143	35.32513	-83.80039	1016258	Tulula Creek	Detailed	28.7	-	C-134 / 370134 4@12'x12' RCBC	Retain & Extend 4@12'x12' RCBC	137	WS-III; Tr	-	X					
										Bridge Alternate L=130'									
3	NC 143	35.32366	-83.79101	1015990	Sweetwater Creek	Detailed	13.7	-	C-132 / 370132 3@12'x9' RCBC	Retain & Extend 3@12'x9' RCBC	249	WS-III	-			X	X	X	
				*SG	Sweetwater Creek Trib.	N/A	-	-	-	-									32
4	NC 143	35.32286	-83.78753	SI	Sweetwater Creek Trib.	N/A	0.31	198	54" CSP w/ HW	1 @6'x7' RCBC	197	WS-III; Tr	-			X	X	X	
5	NC 143	35.3274	-83.77253	1015579	Slay Bacon Branch	N/A	0.56	358	66" CSP w/ HW	1 @7'x8' RCBC	96	WS-III	-			X	X	X	
				*1015990	Sweetwater Creek	Detailed	-	-	-	-	260	WS-III	-						
6	NC 143	35.32865	-83.77164	1015990	Sweetwater Creek	Detailed	10.7	-	C-133 / 370133 3@11'x9' RCBC	Retain & Extend 3@11'x9' RCBC	197	WS-III	-			X	X	X	
7	NC 143	35.33232	-83.76239	1011899	Harwood Branch	N/A	0.39	250	54" CSP w/ HW	1 @ 54" RCP; 2 @ 48" RCP	98	WS-III	-			X	X	X	
8	NC 143	35.34053	-83.7495	1009127	Beech Creek	Limited Detail	4.39	-	3@72" CSP w/ Brick HW & EW	2@10'x8' RCBC	79	WS-III	0.18			X	X	X	
		35.33997	-83.75148	*1015990	Sweetwater Creek	Limited Detail	-	-	-	-	192		WS-III						-
9	NC 143	35.34837	-83.73446	SAD	Sweetwater Creek Trib.	N/A	0.23	147	48"CSP under NC 143	1 @ 54" RCP; 2 @ 48" RCP	86	WS-III; Tr	-			X	X	X	
				*SEQ	Sweetwater Creek Trib.	N/A	-	-	-	-	2	WS-III; Tr	-						
				*1015990	Sweetwater Creek	Limited Detail	-	-	-	-	46	WS-III	-						
				*SAE	Sweetwater Creek Trib.	N/A	-	-	-	-	113	WS-III; Tr	-						
10	NC 143	35.3558	-83.73163	1015990	Sweetwater Creek	N/A	1.09	698	72" CSP w/ Brick HW & EW	1 @ 8'x9' RCBC	111	WS-III	-			X	X	X	
				*SAH	Sweetwater Creek Trib.	N/A	-	-	-	-	121	WS-III; Tr	-						
14	NC 143	35.36357	-83.72544	SAP 1015846	Stillhouse Branch	N/A	0.15	96	No	1 @ 6' x 7' RCBC	272	WS-III; Tr	-				X	X	
15	NC 143	35.36483	-83.72229	1015990	Sweetwater Creek	N/A	0.33	211	No	1 @ 6' x 7' RCBC	438	WS-III	-				X	X	
				*SAX	Sweetwater Creek Trib.	N/A	-	-	-	-	15	WS-III; Tr	-						
				*SAW	Sweetwater Creek Trib.	N/A	-	-	-	-	166	WS-III; Tr	-						
20	NC 28	35.3767	-83.70911	1010074	Carver Branch	N/A	0.17	109	No	1050' of proposed bridge	0	C	-				X		
21	NC 28	35.37318	-83.70072	1010074	Carver Branch	N/A	0.62	397	1 @ 6' x 6' RCBC / Ex. Length 116'	1 @ 7' x 8' RCBC	581	C	-			X		X	
22	NC 28	35.37313	-83.70033	SBJ	Carver Branch Trib.	N/A	0.19	122	1 @ 48" CMP	1 @ 6' x 7' RCBC	82	C	-			X		X	

*Parallel Stream Impacts associated with respective major crossing

MAP ID	ROUTE	LAT	LONG	STREAM/WETLAND ID	STREAM NAME	FEMA STUDY TYPE	DRAINAGE AREA (MI ²)	DRAINAGE AREA (ac.)	EXISTING STRUCTURE	MIN. RECOMMENDED STRUCTURE	STREAM IMPACTS (ft.) w/ 35' Offset	STREAM CLASS	WETLAND IMPACTS (ac.)	APPLICABLE ALTERNATIVES							
									Number, Size, Structure Type	Number, Size, Structure Type				Improve Existing Robbinsville	R-1E	Improve Existing Stecoah	S-2	SW-1A			
23	NC 28	35.37313	-83.69271	1011029	Edwards Branch	N/A	0.25	160	No	1130' of proposed bridge	0	C	-				X				
				SBX	Edwards Branch Trib.	N/A	-	-	-	-	0	C	-								
24	NC 28	35.37088	-83.69058	1011029	Edwards Branch	N/A	0.32	205	1 @ 66" CMP / Ex. Length 50'	1 @ 6' x 7' RCBC	40	C	-								
				*SBV	Edwards Branch Trib.	N/A	-	-	-	-	65	C	-			X			X		
				*1010074	Carver Branch	N/A	-	-	-	-	794	C	-								
25	NC 28	35.37132	-83.68092	1015804	Stecoah Creek	Limited Detail	6.92	-	C-3 / 370003 3@10'x9' RCBC	Retain 3 @ 10'x9' RCBC	124	C; Tr	-				X				
				*SCD	Stecoah Creek Trib.	N/A	-	-	-	-	208	C; Tr	-			X			X		
				*SDS	Stecoah Creek Trib.	Limited Detail	-	-	-	-	7	C; Tr	-					X			
26	NC 28	35.37281	-83.67727	SDT	Stecoah Creek Trib.	N/A	0.15	96	1 @ 60" CMP / Ex. Length 161'	1 @ 6' x 7' RCBC	148	C; Tr	-			X	X	X			
27	NC 28	35.373783	-83.70379	*1010074	Carver Branch	N/A	0.53	340	No	1 @ 6' x 7' RCBC	1095	C	-								
				SBD	Carver Branch Trib.	N/A	-	-	-	-	65	C	-								
				SBI	Carver Branch Trib.	N/A	-	-	-	-	144	C	-								

*Parallel Stream Impacts associated with respective major crossing



File Code: 2730

Date: December 13, 2019

Mr. John F. Sullivan, III, P.E.
Division Administrator
310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601

Dear Mr. Sullivan,

Thank you for your continued coordination and collaboration on the A-0009C project. This letter provides formal concurrence from the National Forests in North Carolina regarding the project's Concurrence Points 1, 2, and 2a. The concurrence points for this project are defined as follows:

- Concurrence Point 1 – purpose and need and study area defined:
 - Purpose and Need:
 - “The project purpose is to provide the transportation infrastructure necessary for the well-being of local residents by improving mobility and reliability between the existing four-lane section on NC 28 at Stecoah and US 129 south of Robbinsville.”
 - Study Area defined: overall proposed study area was reduced from the preliminary study area (Andrews to Almond) to the area lying roughly from slightly west of Robbinsville to east of Stecoah, as shown on the Concurrence Point 1 signature form.

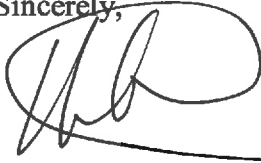
- Concurrence Point 2 – alternatives carried forward for detailed study:
 - Improve Existing US 129/NC 143 and NC 143/NC 28
 - R-1E
 - S-2
 - SW-1A
 - No-Build

- Concurrence Point 2a – bridging decisions (hydraulic structures requiring 72” culvert or larger) and alignment review:
 - None of the major bridging decisions as proposed will have direct effects to USFS lands.



Please continue to communicate your progress on alternative development and estimated timelines so that my staff can incorporate adequate time for engagement in the A-0009C project into their work plans. We look forward to continuing to participate in the planning and merger process for A-0009C. If you have any questions, please contact Amy Mathis at 828-259-0548.

Sincerely,

A handwritten signature in black ink, appearing to read 'H.A. Nicholas', written over a horizontal line.

HURSTON A. NICHOLAS

Forest Supervisor

cc: Crystal Amschler, Project Manager, US Army Corps of Engineers; Andrew V. Gaston, District Ranger, Cheoah Ranger District

NCDOT STIP No. A-0009C
Project Team Meeting
01.07.2020, 2pm

Attendees

Wanda Austin (NCDOT Division 14)
Dave McHenry (NCDOT Division 14)
Josh Deyton (NCDOT Division 14)
Ted Adams (NCDOT Division 14)
Aaron Williams (FHWA)
Crystal Amschler (USACE)
Monte Matthews (USACE)
Claire Ellwanger (USFWS)
Amy Mathis (USFS)
Amanetta Somerville (USEPA)
Amy Chapman (NCDWR)
Kevin Mitchell (NCDWR)
Marla Chambers (NCWRC)
Renee Gledhill-Early (NCSHPO)
Rose Bauguess (Southwestern RPO)
Becky Garland (Graham County)
Lynn Cody (Graham County)

Gary Sneed (EBCI)
Derek Tahquette (EBCI)
Mike Bolt (EBCI)
Robert Wilcox (Cherokee DOT)
Elizabeth Toombs (Cherokee Nation)
Donna Dancausse (Facilitator)
Stacy Oberhausen (TGS/NCDOT PM)
Jay Twisdale (TGS)
Randy Henegar (TGS)
JJ LaPlante (TGS)
Amy Sackaroff (Stantec)
Mike Lindgren (Stantec)
Amber Coleman (Stantec)
Joshua Adams (Stantec)
Emily Love (Stantec)
Thomas Hoppe (Stantec)
Alexa Kennedy (Stantec)

Purpose: To provide the project team with updates that have occurred since the November 20, 2019 Concurrence Point (CP) 2A merger meeting, discuss recent questions from team members, and discuss upcoming coordination meetings

Design Options: Stantec presented the current design options. At the CP 2A merger meeting, Stantec noted design work in progress in Robbinsville and near the NC 28/NC 143 (NC 28 Relocation) intersection.

The September 2019 hydraulic design for R-1E included a long bridge crossing at Tulula Creek, Site 1. In order to reduce impacts, R-1E Refinement was developed, which resulted in Hydro Site 1B. Further design and subsequent coordination with local officials determined R-1E Refinement unnecessary. Detailed studies of R-1E with a bridge > 200-feet proceeded.

The NC 28 Relocation resulted from the Stecoah Heights community and environmental stakeholders' input. NC 28 is currently on the shady side of the mountain and is susceptible to prolonged unsafe winter weather conditions. In order to daylight this portion of NC 28 to sun exposure, the NC 28 Relocation was proposed and is referred to as B-1. B-2 refers to improve existing option of NC 28 in this area.

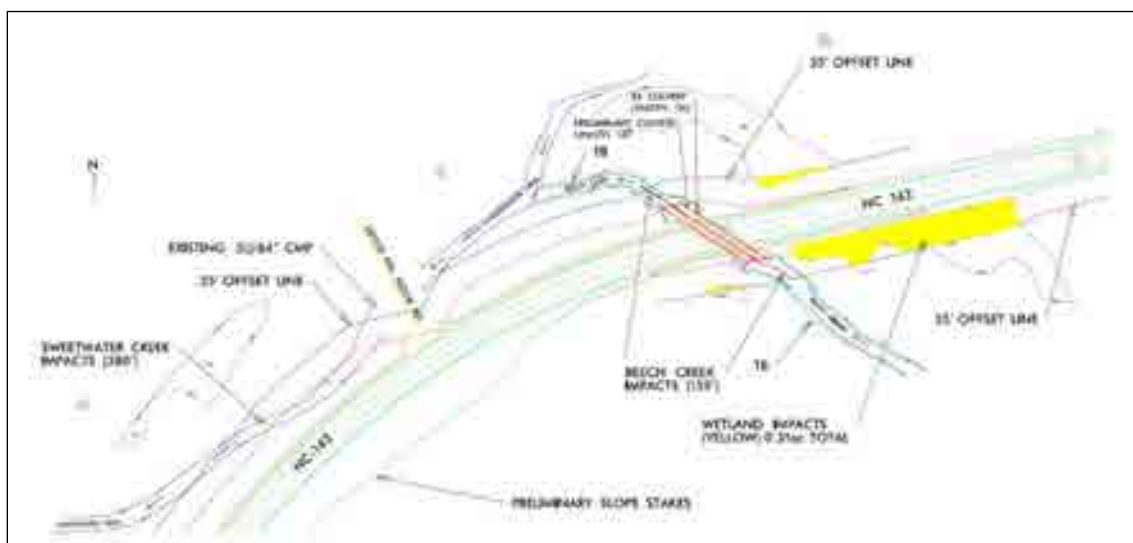
Proposed Typical Sections: Division 14 presented an overview of the proposed typical sections for the project. It has been previously communicated that the project would have a two-lane typical section with passing/climbing lanes where suitable. The purpose of the project is to improve mobility and reliability in the project area, which includes passing/climbing lanes for a 2+1 typical section. Impacts presented at Concurrence Point 2A will be reviewed to ensure they are representative of the 2+1 typical section.

- United States Army Corp of Engineers (USACE) inquired if information would be provided about structures that may have changed as a result of the 2+1 typical section.
 - Team will make sure the CP 2A table is based on the current design.
 - Team will provide information about where passing/climbing lanes were incorporated due to traffic and where they were incorporated due to purpose and need.
 - Team will provide graphics that show how the cross sections transition throughout the project will be prepared.

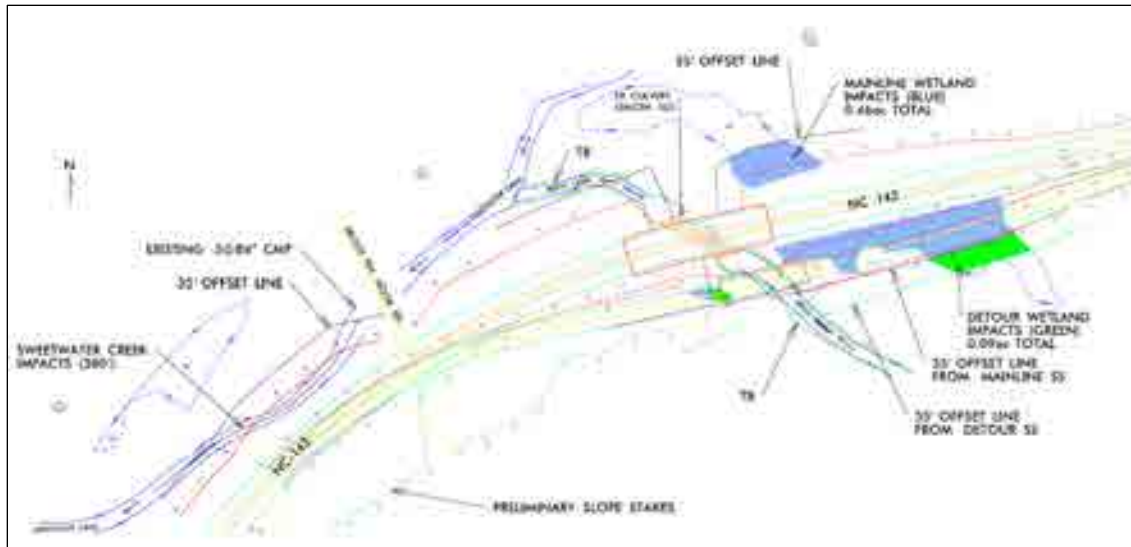
Hydraulic Site 2: TGS Hydraulics noted that the hydraulic whitepaper was sent out on December 20, 2019. Based on the traffic analysis completed in December 2019, the existing lanes at this site are sufficient and therefore no improvements are required at this crossing.

- *See attached for cost estimates: Detour Site 2 Preliminary Estimate*

Hydraulic Site 8: TGS Hydraulics presented a comparison between the bridge and culvert options proposed at this site. The bridge would require a temporary on-site detour with a bridge which would cost approximately \$3.8 million. The total cost for the bridge option would be approximately \$5.9 million. The 2-barrel 10x8 box culvert would cost approximately \$1.4 million. The bridge would require the grade of the existing roadway to be raised by 9 feet, creating a hump/crest in the road. An option for a triple barrel box culvert which would allow for the outer barrels to be used as animal passage was discussed. Impacts are based on a 35-foot buffer of the slope stakes.

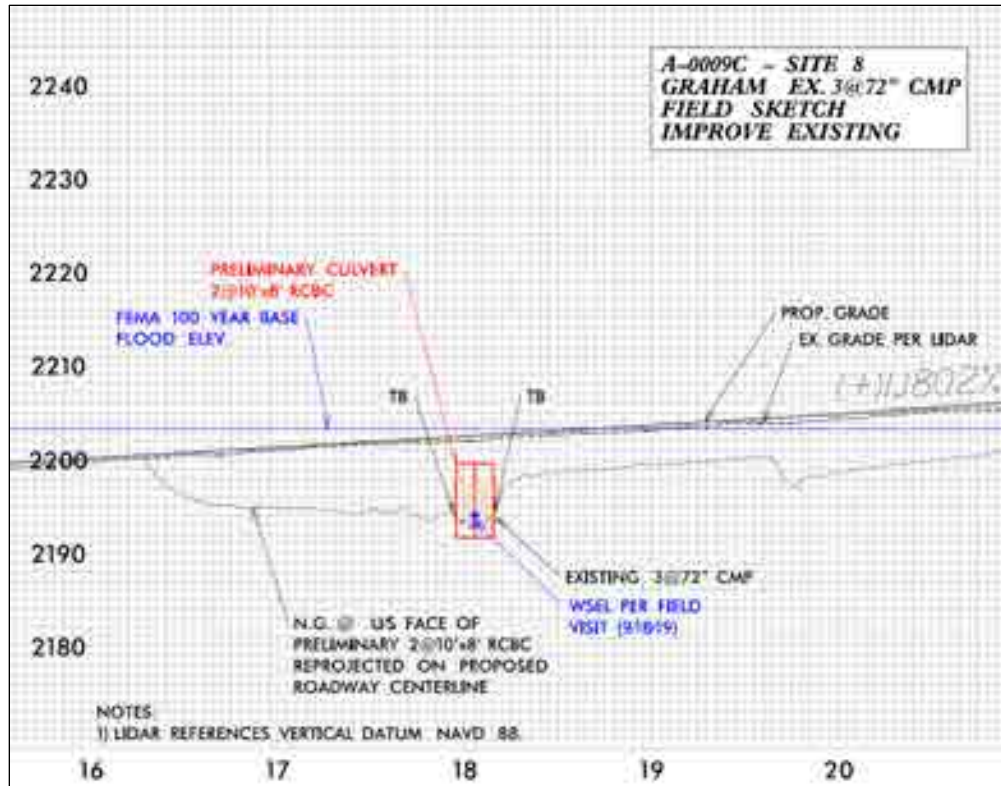


Post Meeting Rendering: Site 8 Culvert Impacts

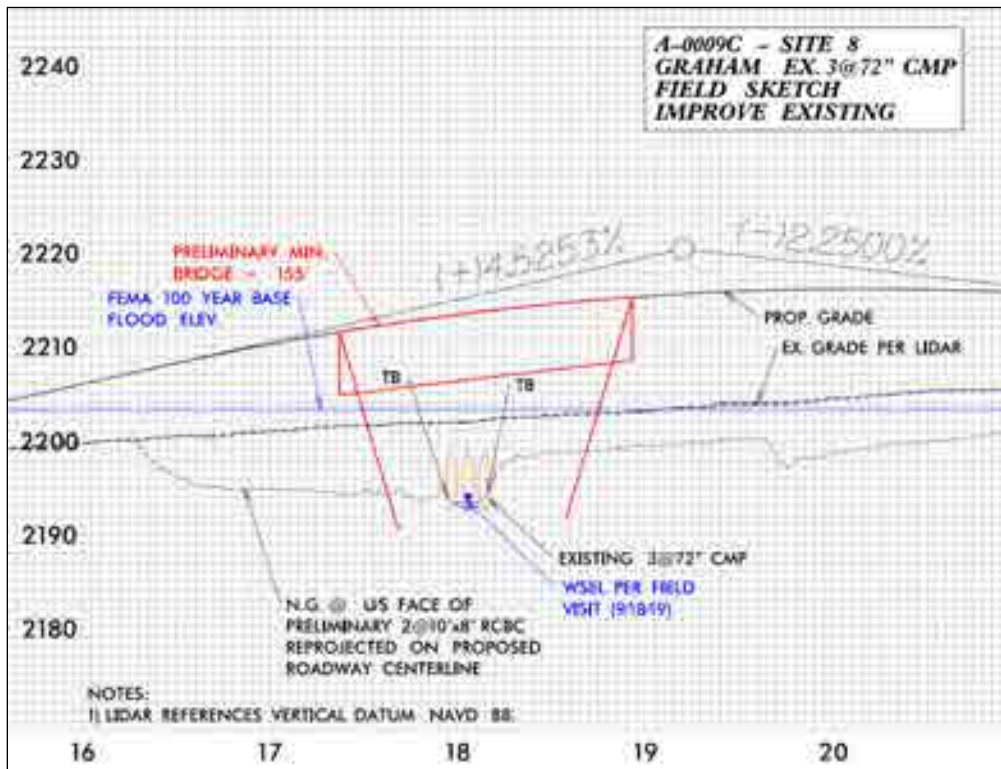


Post Meeting Rendering: Site 8 Bridge Impacts

- Slide 12, USACE inquired about the symbology.
 - TGS Hydraulics noted that the red and green dashed lines represented the slope stakes, while the maroon line represented the slope stakes plus 35-ft.
- USACE inquired about why the grade would need to be raised and whether this was due to floodplain requirement.
 - TGS Hydraulics noted per NCDOT guidance, the grade would need to be raised in order to achieve minimum freeboard (clearance between the water surface and bridge) allowing the bridge to be useable in the event of a 50-year flood. If the existing grade was maintained, the low chord of the bridge would be sitting close to the ground and would not convey the 50-year flow.
- USACE requested schematics (showing banks, waterlines, bridge/culvert, surface water elevation) for the bridge and culvert designs to see where the base of the channel is with regards to the top of bank floodplain. The schematics do not need to be detailed to CP 4B level.
 - *See following pages for post meeting schematics*



Post Meeting Schematic: Site 8 Culvert Option



Post Meeting Schematic: Site 8 Bridge Option

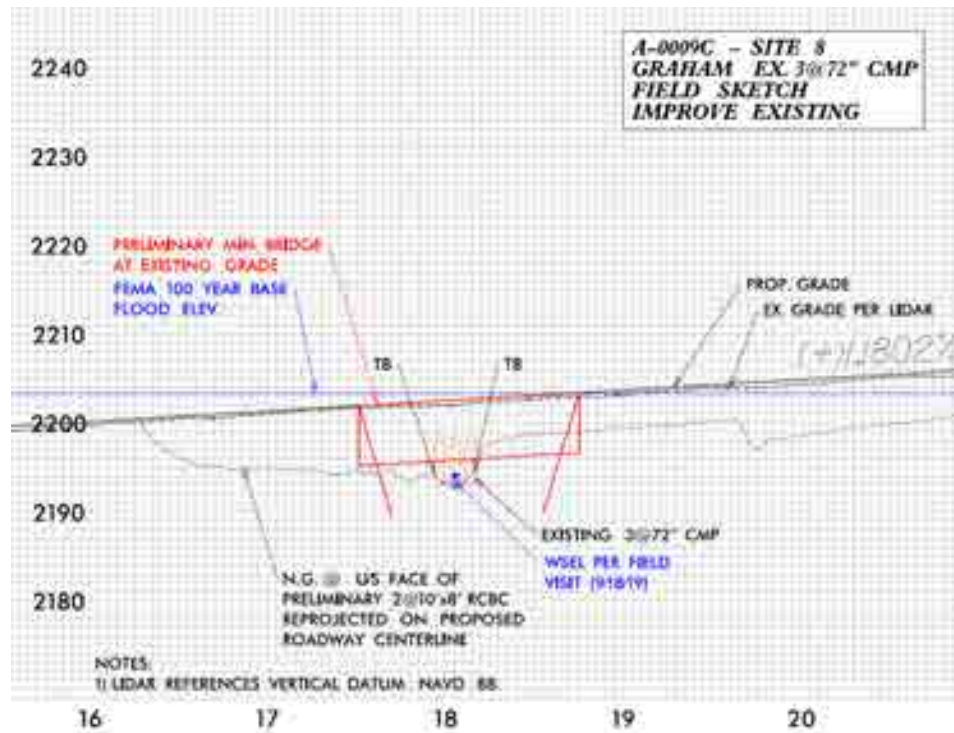
- North Carolina Division of Water Resources (NCDWR) inquired about the permanent impacts of a bridge that would require mitigation.
 - TGS Hydraulics noted there would only be parallel stream impacts to Sweetwater Creek associated with the bridge option.
- USACE noted that the slides had reduced costs for parallel impacts compared to what was presented in the December whitepaper.
 - TGS Hydraulics noted that the impacts presented in the slide (\$399,494 of parallel impacts for the bridge option) were correct and that the meeting minutes would serve as the amendment.
- USACE inquired about the difference in costs presented at this meeting and CP 2A.
 - TGS Hydraulics noted that the costs at CP 2A were not comparing apples-to-apples. Additional work was completed following CP 2A to refine the costs, including generating quantities for the additional earthwork, pavement, guardrail, etc. NCDOT’s estimating group generated the costs based on the quantities provided.
- USACE inquired if the costs presented for all bridge options at CP 2A were conservative.
 - TGS Hydraulics noted that the costs presented in November were solely for construction of the bridge and that additional costs, such as detour routes, were not calculated, therefore all bridge costs looked at in more detail would increase.
- USACE inquired about why the costs for the detour bridge were high.
 - TGS Hydraulics noted that the bridge option would require an on-site detour to maintain traffic. This would require a significant amount of earthwork, pavement, guardrail, and a 120-ft detour bridge.
 - FHWA inquired if providing calculations used to obtain costs estimates would assist.
 - USACE confirmed.
 - *See attached for cost estimates: Detour Site 8 Preliminary Estimate*



Site 8 Detour Bridge

- USACE inquired if a detour is needed for a culvert.
 - TGS Hydraulics noted that it would be phase constructed.

- USACE inquired if a bridge could be stage constructed.
 - Division 14 noted that due to the grade difference, it would not be possible to stage construct the bridge.
- North Carolina Wildlife Resources Commission (NCWRC) inquired if there were other engineering options such as a smaller or lower bridge not constrained by FEMA regulations that may require a design exception.
 - Division 14 noted that if the bridge was lower, it would not provide the required capacity of flow. In order for water to pass, the grade would need to be raised.

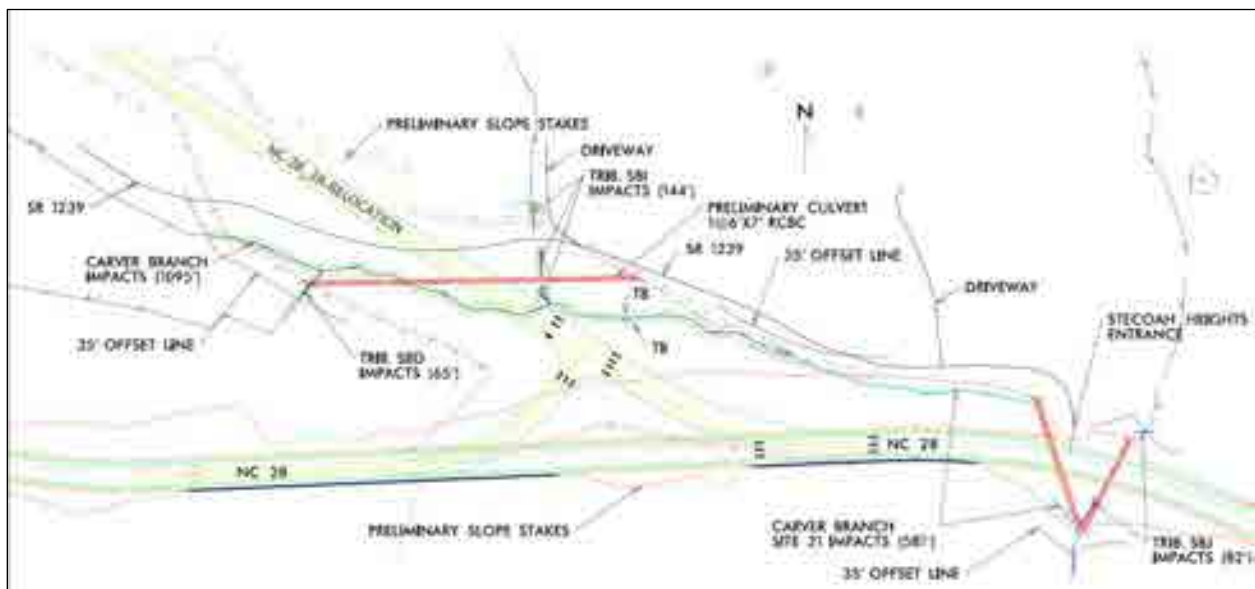


Post Meeting Schematic: Site 8 Bridge at Existing Grade

- NCWRC inquired if 9 feet was the optimum or minimum that the grade would need to be raised.
 - TGS Hydraulics noted that this is the minimum amount that the grade would need to be raised.
- Facilitator inquired about the concerns over not having a bridge.
 - USACE noted that they prefer to see a bridge where possible and it's difficult to understand hydraulically why a bridge is not feasible. Beech Creek is in good condition and they prefer to maintain free flow if possible.
- TGS Hydraulics noted that low flow would be maintained in the center barrel with a triple barrel option.
 - NCWRC noted this option would be fine if a bridge wasn't feasible and affordable. NCWRC agrees with keeping the base flow in one barrel. There are concerns over fish passage with a culvert.
 - Stantec inquired whether a greensheet commitment for a triple barrel culvert should be added to the environmental document.

- TGS/NCDOT PM noted if a triple barrel is agreed upon and a new CP 2A form is signed, then a greensheet commitment is not necessary. TGS/NCDOT PM suggested moving forward with a double barrel since the stream would be contained within one barrel. There were no objections.
- USACE noted that the proposed roadway is three lanes at this crossing and inquired if it could be reduced to two lanes.
 - TGS/NCDOT PM noted that it could not be reduced to two lanes.
 - USACE inquired if they were comfortable that this could be justified at this point.
 - TGS/NCDOT noted they were.
- USACE noted they could make a preliminary determination on what structure needs to be here, but additional information on passing/climbing lanes is needed.
- United States Environmental Protection Agency (USEPA) inquired about the time frame for additional information.
 - Stantec noted these items are top priority and additional information will be provided within a couple of weeks.

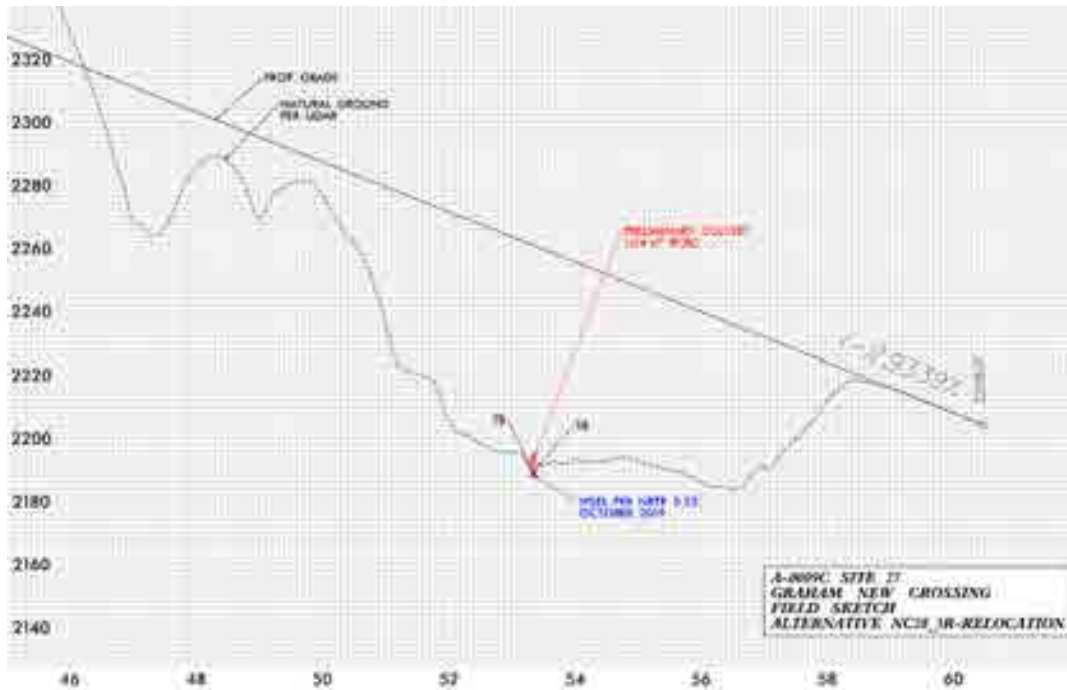
Hydraulic Site 27: TGS Hydraulics presented a comparison between the bridge and culvert options proposed at this site. Baffles could be incorporated during final design. The proposed box culvert would be on 6.5% grade. Stantec noted that a bridge is not feasible at this location due to the 8% grade and 30° curvature required. The bridge would go from a tangent to a curve, which is an undesirable situation. There would be problems tying back into existing NC 28.



Post Meeting Rendering: Site 27 Culvert Impacts

- NCWRC noted that the culvert option is unacceptable to them as the length and grade is unlikely to allow for fish passage. NCWRC requested additional information and discussion on the NC 28 relocation and what the outcome would be if the existing road is not relocated.
 - TGS Hydraulics noted there are culverts with similar slopes on I-26 that allow for fish passage.

- USACE agreed neither a bridge nor culvert is desirable, but a bridge appears unfeasible from a design standpoint. A final decision is not being made at this point.



Post Meeting Schematic: Site 27 Culvert Option

- USACE noted that the NC 28 relocation has not been resolved and needs to be looked at separately. This alternative would need to be examined in comparison to other alternatives at CP 2.
 - NCWRC noted this seems like a separate alternative.
- Federal Highway Administration (FHWA) noted the Core Team is agreeable to revising CP 2 forms to include the NC 28 Relocation, B-1, as a separate option.
- NCWRC noted an on-site field meeting might be helpful at this point.
 - USACE noted they saw several of these sites during their JD walkthrough.
 - TGS/NCDOT PM inquired about interest from the rest of the project team. None was expressed.
- TGS Hydraulics noted the length of the box culvert could possibly be shortened by approximately 100 feet and the channel could be relocated outside of the construction limits.
- Division 14 noted that evaluation of more fish data in Carver Branch would be helpful.
 - *See attached: A-10 Culvert Research Summary; A-0009C Fish Passage Desktop Study*

Due to time constraints, TGS/NCDOT PM suggested wrapping up the information presented from the white paper and setting up follow-up weekly meetings. The Project Team agreed to meet every Wednesday from 1:00-2:30pm for the next several weeks to continue the discussion on the CP2A sites and other topics that were not fully addressed in this meeting.

Action Items/Next Steps:

- Stantec to present graphic displaying typical section locations along the project corridor at next project team meeting.
- TGS Hydraulics to reexamine hydraulic crossing impacts based on 2+1 typical section.

NCDOT STIP No. A-0009C

Project Team Meeting

01.22.2020, 1pm

Attendees

Wanda Austin (NCDOT Division 14)
Dave McHenry (NCDOT Division 14)
Josh Deyton (NCDOT Division 14)
Aaron Williams (FHWA)
Crystal Amschler (USACE)
Amy Mathis (USFS)
Amanetta Somerville (USEPA)
Kevin Mitchell (NCDWR)
Robert Patterson (NCDWR)
Renee Gledhill-Early (NCSHPO)
Ryan Brumfield (ARC)
Jacob Nelms (Graham County)

Gary Sneed (EBCI NRP)
Derek Tahquette (EBCI NRP)
Donna Dancausse (Facilitator)
Stacy Oberhausen (TGS/NCDOT PM)
Burke Evans (TGS)
Jay Twisdale (TGS)
JJ LaPlante (TGS)
Amy Sackaroff (Stantec)
Mike Lindgren (Stantec)
Josh Adams (Stantec)
Emily Love (Stantec)
Alexa Kennedy (Stantec)

Purpose of Today's Meeting: To approve the meeting minutes from the January 7, 2020 Project Team meeting and to discuss typical section refinements and design option B-1 (NC 28 Relocation).

- Facilitator inquired if there were any edits or comments to the January 7 Project Team minutes.
 - United States Army Corp of Engineers (USACE) noted no comments.
 - No additional comments presented, as such, the meeting minutes are approved and finalized.

Purpose of Ongoing Weekly Meetings: Division 14 presented the purpose for ongoing weekly Project Team meetings.

- Attendees should use the chat box to sign in and record questions in an effort to keep the meeting on schedule and on topic.
- The meetings will be used to answer questions that have been asked in merger meetings and to discuss the changes that have occurred between the meetings.
- Discuss how the project team wants to handle design alternatives on the forms
 - Team agreed to handle changes via email and DocuSign the revised forms
- Changes that need to be considered on the revised merger forms
 - CP 2
 - Add B-1
 - R1-E Refinement
 - CP 2A
 - Decision on Sites #8 and #27

Design Options and Typical Sections: Stantec presented an overview of the current design options and typical sections.

- Additional passing lanes have been incorporated since the October 9, 2019 Concurrence Point (CP) 2 meeting.
 - Local officials and NCDOT requested additional three-lane sections due to mobility concerns.



Design Options

NC 28 Relocation (B-1): Stantec presented an overview of this design, which originated out of coordination with local officials, residents, and environmental stakeholders.

- Local officials support this option as it would address wintery weather conditions on NC 28, improving reliability of the road network in the area, and therefore mobility.
- This option would relocate the current NC 143/NC 28 intersection, which would improve sight distance and reduce the potential for crashes at the existing intersection where geometry does not provide a clear line of sight.
 - B-1 can be paired with the Improve Existing option and SW-1A option.
 - Avoids a surveyed historic site on NC 28—eligibility TBD.
 - NCDOT Geotechnical analyzed a bottomless culvert at Site 27 and found that this would not be possible due to a lack of bedrock.
- USACE inquired if the purpose of this discussion was to decide if B-1 should be a separate alternative or if it should be an extension of the Improve Existing option.



Design Option B-1 Combined with Improve Existing

- FHWA noted this discussion was to provide an update on design options and stated this option is considered a new location option.
- Division 14 noted that NCDOT recommends B-1 as the improved existing option because it would address maintenance concerns on the existing NC 28.
- USACE noted the need to determine whether B-1 would be on the CP 2 form.
 - Division 14 noted revised concurrence forms would be e-mailed to the merger team in February if the team agrees to resign.
- USACE inquired how this option specifically meets the project purpose and need. It is appropriate to add this option to CP 2 forms, but it would be beneficial to detail how B-1 addresses purpose and need.



Design Option B-1 Combined with SW-1A

- TGS/NCDOT PM noted that during winter months, this section of existing NC 28 experiences wintery weather conditions and is not daylighted during the year, causing this segment of the road to be unreliable. Option B-1 would allow NC 28 to maintain access during winter months, which increases reliability. It would also address a known safety issue in this area.
- FHWA noted that although safety is not included in the purpose and need, it is something that we are striving for with this project.
- FHWA inquired about the level of detail needed for documentation.
 - USACE requested additional details be included in the meeting minutes.
 - *Update: B-1 would meet the project purpose by improving reliability and mobility on NC 28 in the winter months, as stated above. System reliability would be achieved by placing NC 28 on the sunny side of Barbershop Hill, eliminating closures during the winter due to snow and ice for extended periods of time. Additionally, wider shoulders and improved drainage will decrease the need for future maintenance and closures due to maintenance. System mobility would be achieved by constructing a climbing lane westbound along the proposed 8% grade and by changing the through movement to match the dominant movement, thus eliminating a stop to turn left.*

Miscellaneous Discussion

- TGS/NCDOT noted they would send invitations for additional Project Team meetings on February 12 and 19.
- NCSHPO inquired about the status of cultural resources.
 - Stantec noted that historic architecture is completing fieldwork and obtaining documentation for detailed building surveys. The Historic Structures Survey Report is expected to be completed in April. Archaeology is finishing fieldwork in Stecoah and will be completing fieldwork in Robbinsville next.
 - TGS/NCDOT PM noted an interim management summary was submitted to NCDOT Cultural Resources for review on 01/21/2020.

- North Carolina Division of Water Resources (NCDWR) inquired if more information about acidic rock would be provided. Previous information was provided that showed a high concentration of acidic rock in the S-2 area. NCDWR would like information on whether B-1 or Improve Existing NC 28 would encounter acidic rock and plans for remediation.
 - TGS/NCDOT PM noted that future meetings will discuss this. NCDOT Geotechnical Unit will be invited to this meeting to provide further input.
 - TGS/NCDOT PM noted that past geotechnical reports indicated a high level of pyritic rock in the S-2 area. When restarting the project, the Core Team agreed to use a fresh perspective and did not look at these past reports. Old environmental documents and technical reports do not present any options in the S-2 area due to pyritic rock.
- TGS/NCDOT PM noted that once revisions to CP 2 and CP 2A forms are complete, naming conventions for the alternatives will change. Each alternative will then be presented from terminus to terminus.
- United States Environmental Protection Agency (USEPA) inquired about receiving meeting materials before the meeting.
 - TGS/NCDOT PM noted the Core Team intends to send out meeting materials by noon on the Monday preceding the Project Team meetings and will send out meeting minutes on the Friday after the meetings.
- USFS noted they would not be on the call on January 29, but advocate dropping S-2 from the design options.
 - FHWA will bring USFS up to speed on what they will miss at the January 29 meeting.

Action Items/Next Steps:

- A-0009C Core Team to follow up with Merger Team members who were unable to attend the meeting.
- Invite NCDOT Geotechnical specialist to upcoming Project Team Meetings.
- TGS/NCDOT PM to send additional project team meeting invitations for weekly calls.
 - *Update: Done.*
- Subsequent project team meeting agenda items to include updated wetland and stream impacts, Robbinsville design options, geotechnical scoping recommendations, and S-2.
 - *Update: The agenda for the next Project Team Meeting (Jan 29) will include NHS Designation; Robbinsville Design Options; Geotechnical Scoping Recommendations; S-2*

NCDOT STIP No. A-0009C

Project Team Meeting

01.29.2020, 1pm

Attendees

Wanda Austin (NCDOT Division 14)	Ellen Turco (RGA)
Dave McHenry (NCDOT Division 14)	Paul Webb (TRC)
Josh Deyton (NCDOT Division 14)	Donna Dancausse (Facilitator)
Aaron Williams (FHWA)	Stacy Oberhausen (TGS/NCDOT PM)
Crystal Amschler (USACE)	Randy Henegar (TGS)
Monte Matthews (USACE)	Jay Twisdale (TGS)
Amanetta Somerville (USEPA)	JJ LaPlante (TGS)
Marla Chambers (NCWRC)	Andrea Dvorak-Grantz (Stantec)
Kevin Mitchell (NCDWR)	Amy Sackaroff (Stantec)
Robert Patterson (NCDWR)	Mike Lindgren (Stantec)
Amy Chapman (NCDWR)	Amber Coleman (Stantec)
Renee Gledhill-Early (NCSHPO)	Emily Love (Stantec)
Jamie Lancaster (NCDOT Cultural Resources)	Thomas Hoppe (Stantec)
Elizabeth Toombs (Cherokee Nation)	Alexa Kennedy (Stantec)
Rose Bauguess (Southwestern RPO)	

Purpose of Project Team Meetings: To present new information and respond to questions brought forth by the Project Team. Division 14 presented an overview of future topics to be discussed.

Purpose of Today's Meeting: To approve the January 22, 2020 meeting minutes, inform Team of the National Highway System (NHS) application; confirm understanding of the typical sections; discuss Robbinsville design options, geo-technical scoping recommendations, and updates that concern option S-2.

- North Carolina State Historic Preservation Office (NCSHPO) will review the meeting minutes from last week and send questions/approval to the Core Team.
 - *Update: NCSHPO has no objections to the meeting minutes.*

National Highway System: Division 14 informed the team of a proposal to request NHS designation to add US 129, NC 143, and NC 28 to the NHS. Southwestern Rural Planning Organization (SWRPO) submitted a map revision to Transportation Planning Branch to update the Graham County Comprehensive Transportation Plan (CTP) to align with the current strategic vision of the corridor and the 2019 STIP. The updated CTP has been adopted by all local governments. The NC Board of Transportation will be voting on the CTP update on February 5.

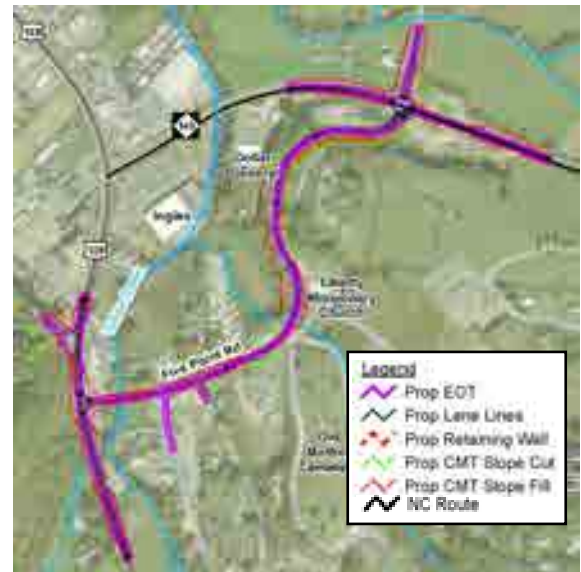
Typical Section Refinements: Typical sections were presented at the January 22 Project Team meeting.

- United States Army Corp of Engineers (USACE) inquired about the percentage of the project that is four lanes.
 - Stantec noted that 4% of the project incorporates four lanes.

Design Option B-1: Division 14 explained further modeling has indicated this option will cause hydraulic issues with the watershed, which would require the water to drain unnaturally. The Core Team no longer recommends this option for further design due to this and other impacts, including the inability to provide access to interior parcels, and a grade of 8% which matches the existing NC 28.

Design Option R-1E: Stantec presented an overview of R-1E and R-1E Refined. R-1E will be carried forward and R-1E Refined will be eliminated from further study. R-1E is supported by local officials.

- USACE inquired if these options impact the Trail of Tears.
 - Division 14 noted that R-1E, R-1E Refined, and Improve Existing impact the Trail of Tears as it crosses the existing US 129.
- North Carolina Wildlife Resources Commission (NCWRC) inquired about the length of the R-1E bridge.
 - TGS Hydraulics noted it is less than 200 feet.
- NCSHPO inquired which design options remained in Robbinsville.
 - Stantec noted R-1E and Improve Existing are being carried forward. Other design options were evaluated but were not carried forward due to impacts or topography.
- Cherokee Nation inquired about the status of archaeological studies in Robbinsville.
 - Stantec noted that archaeological studies are underway. There is an interim management summary under review by NCDOT Cultural Resources.

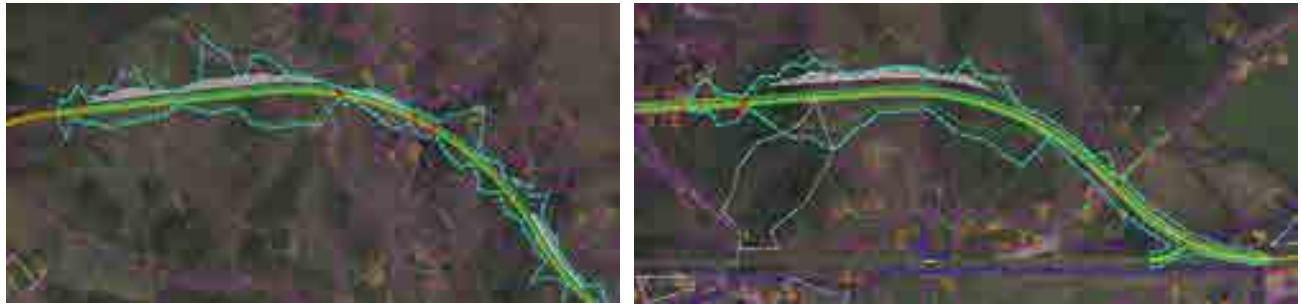


Design Option R-1E

Geotechnical: Stantec provided an overview of geotechnical scoping recommendations for the preliminary design. A tunnel feasibility study is underway.

- USACE inquired about updated impacts to streams.
 - Impact calculations are complete.
- USACE inquired about the possibility of a two-lane road if cut sections are problematic.
 - Stantec noted that a climbing lane was necessitated in this area.
 - Division 14 noted reducing it to a two-lane section would not significantly reduce impacts due to topography.
- North Carolina Division of Water Resources (NCDWR) inquired about other areas of concern for acidic rock.
 - Stantec noted that there are no other areas than the ones presented with S-2. Geotechnical concerns in other areas are due to instability of the material.
- NCDWR would like more information on mitigation associated with pyritic rock.

Design Option S-2: Stantec reviewed changes between the current and previous S-2 designs, which now have incorporated geotechnical scoping recommendations. Environmental features and archaeological information to date were presented.



Design Option S-2: Previous footprint shown in turquoise; current footprint shown in green

- FHWA noted that United States Forest Service (USFS) sent a letter voicing their opposition to S-2 due to AT viewshed impacts.
- USACE inquired if NCDOT would construct this option due to constructability issues presented with the bridges.
 - Stantec noted that bridges were proposed for the project previously. Desktop research has been conducted for anti-icing systems to improve safety on the bridges, but the system currently in use on I-26 bridges in Asheville have not proven effective. Stantec also noted bridges on a curve with a steep grade and superelevation is not desirable from a winter weather safety standpoint.
 - Division 14 concurred these bridges are not desirable.
- United States Environmental Protection Agency (USEPA) noted it was their understanding that the former EIS was rescinded because none of the current alternatives impact acidic rock. USEPA noted concerns over the proposed class of action being an Environmental Assessment (EA).
 - FHWA noted the EIS was rescinded in order to give the project a fresh start.
 - TGS/NCDOT PM noted that earlier studies did not contain any alternatives in this area for the EIS due to pyritic rock. New alternatives were developed with the fresh start and the Core Team was not informed of the pyritic rock until after Concurrence Point (CP) 2.
 - Division 14 noted that they recommended dropping S-2 at CP 2 and the agencies requested to keep it in. Additional information has been received since then and Division 14 still recommends removing S-2 from further consideration. An EA is still being pursued.
 - USEPA noted that they wouldn't recommend an EIS if S-2 is removed.
- NCWRC noted concerns over the EIS and requested to address this in a future meeting.
 - FHWA noted that this is not the same project as in 2008. There has been substantial coordination with resource agencies, and nothing has been suggested that the project would have significant impacts. The team will proceed with an EA and will reassess if significant impacts do arise. No significant issues were raised at the meeting.
- NCSHPO inquired about challenges with the long tunnel.
 - Division 14 noted the western tunnel portals for S-2 and SW-1A are located on an Eastern Band of Cherokee Indians (EBCI) tribal land holding. There is a meeting scheduled with the EBCI tribal council on February 19th to determine how to proceed.

- Division 14 also noted cost is another factor—the available funding today will not cover a tunnel, but Division 14 is interested in gaining additional funds through the NCDOT State Transportation Improvement process and grants.
- NCSHPO inquired about construction impacts with Improve Existing.
 - Division 14 noted traffic will be maintained during construction and detours do not appear to be an issue. At this time with the available conceptual plans, onsite detours that would expand the construction footprint are not anticipated. Construction impacts will be minimized. Division 14 will work with Cultural Resources to avoid, minimize, or mitigate any impacts on any alternative.
- NCSHPO noted the redundancy of S-2 meets purpose and need better than other options.
 - Division 14 noted there is only redundancy in the Stecoah Valley area and along NC 143 tunnel section.
 - FHWA noted there are other factors to consider, including tribal preference. There is a meeting on February 19 with the tribal council to discuss the design options.
- NCSHPO inquired if EBCI would be able to absolutely stop the project from going under their land.
 - FHWA noted they would be able to.

Given the implications that could occur as a result of the February 19 meeting with EBCI, the Project Team has agreed to postpone future meetings pending the outcome of the Tribal coordination.

NCDOT STIP No. A-0009C
FHWA, USACE, NCDWR, NCWRC Meeting
01.29.2020, 2:30pm

Attendees

Wanda Austin (NCDOT Division 14)	Randy Henegar (TGS)
Aaron Williams (FHWA)	Jay Twisdale (TGS)
Monte Matthews (USACE)	JJ LaPlante (TGS)
Crystal Amschler (USACE)	Amy Sackaroff (Stantec)
Marla Chambers (NCWRC)	Amber Coleman (Stantec)
Kevin Mitchell (NCDWR)	Emily Love (Stantec)
Donna Dancausse (Facilitator)	Thomas Hoppe (Stantec)
Stacy Oberhausen (TGS/NCDOT PM)	Alexa Kennedy (Stantec)

Purpose: This meeting was scheduled to discuss questions regarding hydraulic sites and proposed stream impacts.

Site 8: This site crosses at Beech Creek. A bridge and culvert option were evaluated at this site. A double 10x8 culvert is proposed.

- United States Army Corp of Engineers (USACE) inquired if the current road is designed to overtop and whether raising the elevation would interfere with that.
 - TGS noted it overtops at a point of relief that is down grade from the crossing. Raising the grade would require increasing the hydraulic opening to offset the overtopping area that would be lost.
- FHWA noted that a bridge at this site would cause a hump in the road and the grade would have to be raised 9 feet.
- North Carolina Wildlife Resources Commission (NCWRC) inquired if the stream would flow through one of the barrels.
 - TGS noted low flow would be through one barrel.
- Division 14 inquired if it was agreeable to recommend a culvert for Site 8.
 - USACE noted this was fine.
 - NCWRC stated that a culvert is fine. NCWRC noted that they understand why a bridge would have to be elevated, but wanted to review their notes to evaluate the two options before making a final decision.
- TGS noted this is not a trout stream.
- NCWRC inquired if there are any samples.
 - Stantec noted they have sampled on Sweetwater Creek, but they do not have any samples on Beech Creek.

CP 2A Table: Updated stream impacts in the CP 2A reflect the updated designs. Stream impacts presented are either directly related to the major hydraulic crossings or as a result of the major hydraulic crossing. The CP 2A table does not include all stream impacts for the entire project.

- NCWRC inquired how much of the project has four lanes.

- TGS noted 4% of the project includes four lanes, but there are not four lanes at any major crossing.
- USACE requested to see how updating the stream impacts affected the alternatives.
 - TGS noted the CP 2A table identifies the alternatives affected by each crossing.
- USACE inquired about the reasoning behind the project changing from a two-lane to a three-lane project.
 - Division 14 noted that three lanes contribute to reliability and mobility. Designs were still under development during early project discussions of the typical section.
 - Stantec noted that reliability is a major factor for local officials. Emergency responders in Graham County have noted previously that anything less than a four lane would not be useful.
 - Stantec noted that the change from 2+1 typical section did not change the four lane areas. These were already incorporated at Concurrence Point 2A.
- USACE inquired about how a 2+1 typical section does not contribute to purpose and need.
 - FHWA noted the three-lane typical section improves mobility by allowing drivers to pass turning and slower vehicles.
 - Facilitator noted that the local officials have always maintained that mobility and reliability need to be improved and NCDOT is trying to advocate for this.
- USACE noted that if there is a way to have less impacts and still meet purpose and need, this option needs to be evaluated.
 - NCWRC agreed and noted they would like a smaller footprint.
- Facilitator inquired about how to determine what footprint is needed.
 - USACE agrees that passing lanes are needed, but it seems they are being put everywhere without much thought.
 - Division 14 noted that traffic did not warrant a four-lane facility. Passing lanes were applied according to AASHTO guidelines.
- USACE noted it would be helpful to bring up the AASHTO standards and examine if the standards will allow for a two-lane road in an area that will have stream impacts.
 - Division 14 noted this is typically analyzed at Concurrence Point 4.
 - NCWRC noted it would be beneficial to have justification for where the extra lanes were added.
 - Division 14 noted the AASHTO standard was applied throughout and suggested reviewing the notes from the January 22 Project Team meeting might be helpful.
 - Stantec noted the map handouts emailed for the January 22 Project Team meeting show where passing lanes were added after Concurrence Point 2.
- USACE noted that proposed structure cost estimates should be included in the CP 2A table.

Action Items:

- TGS will revise the CP2A table to include estimates of the crossings.
- NCWRC will provide comments on Site 8.



January 30, 2020

Attendees:

Aaron Williams, FHWA NC Division
Stephen Yerka, EBCI THPO

Purpose: To give an update of the project and discuss where the team with the Section 106 process.

Project Status: FHWA informed the EBCI THPO of the following project updates:

Tribal Lands

- In November 2019, EBCI's AG office confirmed the land adjacent to NC 143 were owned in trust
 - EBCI THPO mentioned that from the Section 106 aspect, it doesn't matter whether the land is owned in trust or fee-simple.
- FHWA informed the THPO of the 12/17 meeting with EBCI's AG's office as well as the upcoming meeting on February 19th at 9:00a.

Section 106

Historic Architecture

- 65 percent of the fieldwork is complete
- There are zero properties that have been identified within the Tribal lands.

Archeology

- FHWA mentioned that an Interim Management Summary was drafted by TRC and was being reviewed by NCDOT. From the initial look at the management summary, FHWA quickly summarized the following from the draft:
- There are three known NRHP eligible sites under Criterion D
 - Avoidance is preferred; mitigation through data recovery excavations if necessary
- There are two sites that must be avoided under Criterion A
 - These sites have association with a mound and Fort Montgomery

General Discussion

- FHWA asked if EBCI THPO if they would lead the Section 106 process on tribal land.
 - EBCI THPO confirmed they will be the lead
- FHWA stated that TRC would be submitting a request to obtain an Archeological Resources Protection Act (ARPA) permit to begin archeology investigations on Tribal lands.
 - EBCI THPO stated that TRC was familiar with the process and they would be on the lookout



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of Transportation
**Federal Highway
Administration**

North Carolina Division

310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601

January 30, 2020

- EBCI THPO stated that their main priority is not disturbing burials and they would not sign off on removing human remains.
- EBCI THPO generally concurs with mitigation to remove for data recovery
 - If this occurs, EBCI would like to be able to comment on the RFP and Scope of Work
 - FHWA stated that giving the Tribe the opportunity to comment on these documents before they were sent out would not be an issue.
- EBCI THPO stated that as of date, no information that has been presented to the Tribe to make them think they wouldn't concur with Section 106.

Action Items

1. FHWA to send EBCI THPO the most current shapefiles once we have eliminated the alternatives that will not be carried forward.
2. FHWA to send EBCI THPO relevant reports and spatial data when the information becomes available.



February 19, 2020

Attendees:

Aaron Williams, FHWA NC Division	Rainee Tetreault, EBCI Natural Resources Program
Mike Dawson, FHWA NC Division	Bucky Brown, EBCI Tribal Council, Snowbird/Cherokee County
Wanda Austin, NCDOT Division 14	Adam Wachacha, EBCI Tribal Council, Chairman, Snowbird/Cherokee County
Josh Deyton, NCDOT Division 14	Renee Gledhill-Earley, NC DNCR (called-in)
Frankie Dills, NCDOT Division 14	John Mintz, NC DNCR (called-in)
Ryan Clayton, EBCI AG's Office	
Gary Sneed, EBCI Natural Resources Program	
Jeremy Watkins, Tribal Construction	

Location: Qualla Boundary, EOC Small Conference Room, 282 Seven Clans Lane, Cherokee NC 28719

Purpose: For FHWA and NCDOT to give an overview of the A-0009C project, discuss the location and impacts to Tribal land, and gather feedback.

During the presentation, the study alternatives were presented along with a brief history of the project. FHWA discussed how the project has evolved and what the remaining alternatives looked like. FHWA also discussed the cross section that the Tribe would see within the Tribal land. NCDOT then discussed the following alternatives;

- improve existing NC 143
- SW-1A, S-2 and
- R-1E

Impact tables were also presented, which showed the estimated impacts to Tribal land near NC 143 and the Trail of Tears. It was stated that the estimated impacts to the Trail of Tears were preliminary and studies were still ongoing.

Key Takeaways

- EBCI would like more time to review the information, but from a first look, improve existing is their preference since it is the least impactful to the Tribal land.
- EBCI has some concerns with the tunnel options due to the amount of impacts, but they also see a benefit in redundancy that either of the tunnel options bring to the area.
- EBCI to hold informational meeting with the possessory holders to receive their input on which alternative they would like to see carried forward.

NCDOT STIP No. A-0009C

Bat/Warbler Update

02.07.2020, 10am

Attendees

Claire Ellwanger (USFWS)

Dave McHenry (Division 14)

Marissa Cox (NCDOT Biological Surveys)

Tyler Stanton (NCDOT Biological Surveys)

Melissa Miller (NCDOT Biological Surveys)

Josh Adams (Stantec)

Amber Coleman (Stantec)

Alexa Kennedy (Stantec)

Purpose: This meeting was scheduled to discuss potential project commitments and mitigation measures related to bat species and the Golden-winged warbler.

Discussion

- Stantec noted that the preferred alternative had not yet been selected. Potential conservation measures for the Golden-winged warbler include secondary succession and habitat creation. Potential conservation measures for bats includes winter clearing, limited lighting, and avoiding nighttime construction.
- Division 14 noted that the Section 7 document will quantify the impacts on early successional habitat. There may be an opportunity to allow fill slopes to revert.
- Stantec noted one of the biggest concerns is the use of pesticides and herbicides on United States Forest Service (USFS) land.
 - Division 14 noted that only select products are allowed. The Environmental Assessment will need to address herbicide treatment.
- Stantec inquired if there had been any discussions about mitigation ratios.
 - United States Fish and Wildlife Service (USFWS) noted they do not identify specific mitigation ratios, but more specific measures will be discussed when a proposed action is identified.
- NCDOT Biological Surveys inquired about how the Golden-winged warbler should be addressed.
 - USFWS noted that the species is proposed for listing and suggested including proactive conservation commitments, such as a voluntary commitment for habitat.
 - Stantec recommends including commitments in the BA as it is possible the species may be listed before construction begins.
- Stantec inquired if the conservation measures for the Golden-winged warbler discussed in the meeting were sufficient at this point.
 - USFWS noted they were.
- Stantec noted the proposed determination for the Golden-winged warbler will be based on the alternative and most of the remaining alternatives have the potential to affect the species.
- USFWS noted that potential Section 7(a)(1) commitments for the Northern Long-Eared Bat (NLEB) could include acoustic surveys, mist netting, and tracking females to roost trees and could occur over two to three field seasons.

- NCDOT Biological Surveys noted similar Section 7(a)(1) measures were occurring in eastern NC and will share details with USFWS.
- Stantec noted that, due to recent court proceedings, it is possible the 4(d) status of NLEB will change during the project and it would be beneficial to treat it as such in the BA.
 - NCDOT Biological Surveys noted that FHWA has indicated a preference for consultation on the species in other projects, particularly the Asheville Connector.
- NCDOT Biological Surveys inquired if there would be a May Affect, Likely to Adversely Affect call for NLEB.
 - USFWS noted they anticipate more adverse impacts with S-2, which overlaps an Indiana bat maternity roost buffer, and S-6.
 - Stantec noted that S-6 has been dropped from further study.

Action Items:

- NCDOT Biological Surveys will send costs for Section 7(a)(1) measures.
- NCDOT Biological Surveys will send the Asheville Connector BA.
- USFWS will send more specific information related to listing of the Golden-winged warbler.



February 19, 2020

Presentation

Improve Existing Alternative

- This alternative has two possible relocations associated with it. Anticipated Relocatee B is on the right of way line.
 - Impacts can be mitigated to not impact the house.
- EBCI stated that House A is a single wide trailer and House B is a two-story house that used HUD money. The home that used HUD money is paid off in full.
- Tribal land impacts on this alternative is estimated at 3.47 acres.

SW-1A Alternative

- This alternative has three possible relocations associated with it.
- House A will need to be relocated due to the slope. House B and C could be relocated depending on the outcome of mineral rights.
- House B is located directly over the proposed tunnel while House C is adjacent to the proposed ROW line.
 - House B is located approximately 149.8 ft. above the tunnel and House C is located approximately 293.9 ft. above.
 - The max depth of the tunnel is approximately 720.8 ft. below the surface.
- Access roads to House B and C can be maintained.
- EBCI stated that House A and B are newer homes, possibly less than five years old. House C is a little bit older than A and B.
- EBCI asked about how vibrations will be handled on the structures above the tunnel.
- NCDOT stated that they would set up some type of seismograph to monitor the vibrations. The blasting operation would also be modified to mitigate the size of the blast thus reducing the vibrations.
- NC DNCR asked if the existing alignment on NC 143 would be maintained if the tunnel option was selected.
 - NCDOT stated that the existing alignment would be maintained if one of the tunnel options were constructed.
- Potential Impacts if mineral rights are also acquired are estimated at 13.79 acres. The potential impacts if mineral rights do not need to be acquired are estimated at 7.74 acres. The 7.74 acres would be land needed from the tunnel portal westward to the tribal parcel line.

S-2 Alternative

- This alternative also has three possible relocations associated with it.
- House A will need to be relocated due to the slope. House B and C could be relocated depending on the outcome of mineral rights.



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- House B is located approximately 159.2 ft. above the tunnel and House C is located approximately 337.2 ft. above the tunnel. The max depth of the tunnel is approximately 669.3 ft. for this alternative.
- Access roads to House B and C can be maintained
- Potential Impacts if mineral rights are also acquired are estimated at 10.78 acres. The potential impacts if mineral rights do not need to be acquired are estimated at 5.59 acres. The 5.59 acres would be land needed from the tunnel portal westward to the tribal parcel line.
- EBCI stated that House C is a new structure that had recently been renovated. House C is a new structure.

R-1E Alternative (Trail of Tears Impacts)

- The information that we currently have of Fort Hill is imprecise.
- The two lines represented in slide 8 represents the Trail of Tears. The upper line (green) is work that was completed by Brett Riggs in 1998 for this project. The lower line (brown) is the National Historic Trail designated route.
- TRC is in the field currently verifying the locations and getting more information for the project.
- Estimated impacts are based on a 25-foot offset on each side of the Trail.
- NCDOT presented the R-1E options with both the roundabout and the traditional t-intersection option.
 - Potential impacts for the roundabout option are estimated at 0.57 acres.
 - Potential impacts for the t-intersection option are estimated at 0.52 acres.
 - Potential impacts for the improve existing US 129 option are estimated at 0.10 acres.
- NC DNCR asked about an existing mound that may be on or near the improve existing option near Robbinsville.
 - FHWA and NCDOT stated that the information that they had for archaeology was limited and that further studies are being done. The estimates that were presented were from a high level.

General Discussion

- FHWA asked the EBCI how they felt about the alternatives that were presented and whether they had a preference.
 - EBCI stated that without having more time to look at the information, it seems that the improve existing option is least impactful to the Tribal land.
- EBCI asked if NCDOT knew of any other tunnels like this one that went under residential areas.
 - NCDOT stated that they did not. Reference was made to other larger cities and tunnel systems



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- FHWA asked the EBCI how they felt about the tunnel options. EBCI stated that they see pros and cons with the options:
 - Pro: The tunnel would provide redundancy in situations where NC 143 is closed due to slides or weather events.
 - Cons: The tunnel alternatives seem to have more impacts on Tribal land. It would also be difficult to relocate their possessory owners. Currently, the EBCI already has a land list for members that are waiting to be relocated, due to the lack of housing available.
- EBCI stated that NCDOT would have to consider the septic systems
- EBCI stated that there are no municipal water systems
- NCDOT inquired about the locations of the wells under the properties
 - EBCI stated that they would need to find out how deep the wells go. They could be anywhere between 300-700 feet deep.
- NCDOT suggested holding a meeting with the possessory holders to discuss the project since they need to be okay with the project to move forward.
- FHWA asked about the process for land acquisitions
 - EBCI stated that the NCDOT would pay the BIA, the BIA would then pay EBCI, then the EBCI would pay the possessory holder.
- FHWA ensured the Tribe that all matters related to the Section 106 process including archaeology would be handled through consultation as the project progresses.

Next Steps

1. EBCI AG's office will work with BIA to find out who the possessory holders are and where the parcels are located.
2. AG's office to work with Tribal Infrastructure group to obtain information on the depth of the wells.
3. Hold an informational meeting for the possessory holders that could be impacted by the project to understand their perspective and how they feel about the alternatives (EBCI AG to confirm which option they prefer).
 - a. First option: EBCI to hold informational meeting with only the Tribe. This would then be followed up by another meeting with FHWA/NCDOT present, if necessary.
 - b. Second option: EBCI, FHWA, and NCDOT to hold an informational meeting together in one setting.
4. Internal meeting to be held with the Tribal Council after the meeting with the possessory holders. This could be held on a Wednesday Council meeting to fill in the rest of the Council.
 - a. The decision from this meeting will inform the A-0009C project team on how to move forward.
 - b. EBCI AG's office to send a letter to FHWA to document the Tribe's position on the alternatives. The letter will help FHWA/NCDOT in their decision-making process and



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help prepare their environmental document. (Timeframe to be determined after talking with Mr. Wachacha)

5. Upon selection of the preferred alternative, a resolution will be passed on a Thursday Council meeting, used to pass resolutions and legislation.
6. Negotiations between the BIA and NCDOT on the type and amount of land acquisition necessary to construct the preferred alternative will take place.

Action Items

1. FHWA to send design files to AG's office - **completed**
2. AG's office to find out who the possessory holders are and how much of their land will be impacted.
3. AG's office to find out the depths of the wells for the homes impacted by SW-1A and S-2.
4. EBCI will reach out to the possessory holders to set up a meeting to
5. EBCI, FHWA, and NCDOT to continue coordination to move forward

NCDOT STIP No. A-0009C
AT Stakeholders Meeting
3.06.2020, 10:30am

Attendees

Amy Mathis (USFS)

Erik Crews (USFS)

Joel Hardison (USFS)

Morgan Sommerville (ATC)

Renee Gledhill-Earley (NCSHPO)

Jamie Lancaster (NCDOT Cultural Resources)

Denise Nelson (NPS)

Clarence Coleman (FHWA)

Wanda Austin (NCDOT Division 14)

David Hinnant (NCDOT)

Stacy Oberhausen (TGS)

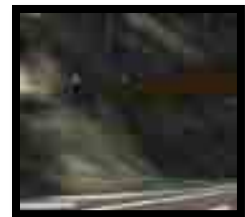
Amy Sackaroff (Stantec)

Michael Wray (Stantec)

Thomas Hoppe (Stantec)

Purpose: This meeting was scheduled to discuss potential visual and physical effects to the Appalachian Trail (AT) and develop next steps for Section 106 coordination for the AT.

- Stantec explained the NC 28 relocation (Design Option B-1) was no longer a feasible design option and local stakeholders have been informed of the decision.
- Stantec noted the additional viewpoints required by USFS.
- Stantec led an overview of the draft Visual Impact Assessment (VIA).
 - The Appalachian Trail Conservancy (ATC) noted that Viewpoint (VP) 6 is nearly a 180-degree view.
 - Renderings were developed with leaves removed in the foreground (similar to leaf-off condition).
 - Stantec noted the area along the powerline easement was shown as barren in the rendering since there are no tall trees along the powerline
 - United States Forest Service (USFS) inquired whether there would be cut slopes on the south side of the pedestrian bridge, or if any were necessary in the area.
 - Stantec stated there may be some shallow cuts.
 - USFS inquired about the height of the retaining wall at VP3.
 - Stantec stated that the wall would be higher in the bend at approximately 20-25 feet, roughly 10-15 feet near the stairs, and approximately 9.5 feet near the location of the car in the rendering.
 - Stantec also noted the existing sight distance is estimated at approximately 289 feet which meets a 35-mph design speed. The proposed sight distance is estimated at approximately 312-feet, which meets a design speed of 40 mph.



- NC State Historic Preservation Office (NCSHPO) noted that the area near VP3 would be dangerous for pedestrians due to limited sight distance for vehicles coming through the curve. USFS concurred and noted that pedestrians may be carrying heavy backpacks, which would further inhibit their movement.



- NCDOT noted that an at-grade pedestrian crossing would be as safe as the crossing is today. A pedestrian bridge or signs/mirrors/cantilever flashers would all be project elements that would either mitigate adverse effects to the AT or enhance the AT crossing.

- Stantec reviewed the potential pedestrian bridge mitigation along NC 143.
 - ATC inquired whether the pedestrian bridge could be moved further east to near the stairs.
 - Stantec noted that moving the bridge eastward would create a sizable increase in earthwork and require construction of a path/stairs to bring pedestrians to and from the parking lot.
 - National Park Service (NPS) concurred, and asked when a decision would be made, as well as who would own the bridge.
 - NCDOT stated they would be willing to install and maintain the pedestrian bridge.
 - USFS inquired about the minimum 25-foot clearance for the bridge and wondered if the clearance could be reduced and the bridge length shortened.
 - Stantec noted NCDOT set the minimum clearance at **24 feet** [*corrected from 23-foot minimum clearance as stated during meeting*] to accommodate oversized vehicles, and that the 25-foot clearance reflects the minimum plus what was needed to connect the pedestrian bridge to either side due to topography.
 - ATC and NPS noted that they have no concerns with minor trail relocations, and that safety of the trail users is the most critical issue in this area.
 - Stantec said that the trail relocations would be approximately 137 feet on the north side of NC 143 and 213 feet on the south side with the bridge in its current proposed location.
 - ATC noted that the AT is a scenic trail, so hikers would likely utilize the bridge if the view is improved from the parking lot.
 - ATC noted that ABA stands for Architectural Barriers Act and applies to outdoor spaces.
 - NCDOT will develop a rendering from the pedestrian bridge.
- The group discussed the Section 106 approach for the AT.
 - Stantec mentioned two approaches for Section 106 work: discussing the AT independently or discussing all Section 106 work together.
 - NCDOT proposed completing Section 106 for the AT first and completing the remainder of Section 106 for historic architecture and archaeology separately.
 - USFS would like to see earthwork, landscape changes, and direct impacts to the trail/FS land for the Section 106 AT call. NCSHPO's concerns include potential development and its impact to the AT, plus other indirect and cumulative effects to the characteristics that make the AT eligible for the National Register.

- Stantec has completed a draft ICE and will provide the document, once finalized, that includes supporting information to the stakeholder group.
- Stantec noted highlights from the draft ICE report, noting that the Town of Robbinsville is not planning to expand water/sewer, nor do they have any plans for development. Any likely development would be similar to the Stecoah Heights area, which includes buying homes to convert to AirBNBs for the vistas.
- NCSHPO noted concern with the level of development in S-2.
- NCSHPO and NPS would be willing to do Section 106 on the AT separately.
 - USFS and NPS will need to wait on Supreme Court decision on Cowpasture River Case (April-June) to weigh in on AT management and providing any Section 106 reviews.
 - NCDOT and FHWA stated that waiting until June would not meet the project schedule and proposed moving to reach consensus on Section 106 soon and revisit, if needed after SCOTUS decision.
 - Stantec noted the possibility of using “Conditional Approval” and reaffirm the decision in the FONSI, if necessary. USFS and NPS will need to vet this approach with their legal counsel to see if acceptable.
 - ATC noted that none of the mitigation options would change the plan for the road.
 - NCSHPO noted that the project could cause adverse visual effects; if they are unavoidable, the project would not meet 4(f) requirements and would require an amendment to the Forest Management Plan. Stantec mentioned that potential 4(f) mitigation would be a factor in the 4(f) effects decision.
 - FHWA noted, since it is the lead federal agency for compliance with NEPA, including Section 106 and Section 4(f) for this project, that litigation would occur only after the anticipated FONSI has been approved. Furthermore, no decisions made by FHWA are final until the anticipated FONSI has been approved.

*** Post Meeting Update - Following the meeting, USFS reviewed the methodology proposed for the additional viewpoints and agreed it was appropriate, given sufficient detail. The number of additional views was reduced from eight to six, as the views for S-2 and SW-1A from the Stecoah Valley Center were deemed unnecessary.*

Next Steps/Action Items:

- USFS and NPS will attempt to coordinate with respective legal counsels for guidance on the Section 106 decision.
- Stantec will verify that VAUs 9 and 10 contain the correct views within the VIA.
- Stantec will work with NCDOT Visualizations to develop a rendering from the potential pedestrian bridge.
- Stantec to send copy of PowerPoint presentation. *Completed 03/06/20*
- Stantec to provide the group with the ICE report once finalized.

NCDOT STIP No. A-0009C
AT Stakeholders Meeting
04.16.2020, 1:00pm

Attendees

Wanda Austin (NCDOT Division 14)	Erik Crews (USFS)
Jody Kuhne (NCDOT Geotechnical)	Morgan Sommerville (ATC)
Shane Clark (NCDOT Geotechnical)	Renee Gledhill-Earley (NCSHPO)
Jamie Lancaster (NCDOT Cultural Resources)	Denise Nelson (NPS)
Mary Pope Furr (NCDOT Cultural Resources)	Donna Dancausse (Facilitator)
Aaron Williams (FHWA)	Stacy Oberhausen (TGS)
Clarence Coleman (FHWA)	Amy Sackaroff (Stantec)
Amy Mathis (USFS)	Emily Love (Stantec)

Purpose: This meeting was scheduled to provide attendees with information and options with renderings that concern efforts to minimize impacts to the Appalachian Trail (AT) and provide an update on local official coordination.

Project Update:

- Division 14 noted the Graham County Commissioners had unanimously voted on the Improve Existing as their preference for a recommended alternative.
 - Commissioners had initial concerns about the number of passing opportunities; however, NCDOT noted proposed tunnels will not reduce travel time by the desired 10-15 minutes.
 - NC State Historic Preservation Office (NCSHPO) noted concerns over the Commissioners potentially weighing travel time savings over reliability for emergency response.
- Stantec provided an overview of the improve existing design option at the AT. The design option includes climbing lanes in both directions, which results in a four-lane cross section at the AT.
- Division 14 noted tribal coordination and the tunnel feasibility study were still outstanding and may affect alternative decisions.

Pedestrian Bridge/Retaining Wall Minimization Options:

- Stantec noted form liners could be added to the pedestrian bridge or retaining walls to mitigate visual impacts.
 - The National Park Service (NPS) noted a preference for one color group vs multiple colors to maintain natural look
- Stantec provided information on geocell retaining walls which can be stacked, filled with medium, and planted.
 - The AT Conservancy (ATC) inquired about the lifespan of geocell versus regular concrete retaining walls.
 - NCDOT Geotechnical stated geocell retaining walls are thick, materials are manufactured with UV protection, and have an approximate life of 50 years, as with concrete.
- Stantec reviewed the planted retaining walls at the Cumberland Gap tunnel.
 - Division 14 noted the walls could be tiered and set back approximately 8 feet per section, which would allow additional plantings.

- Stantec noted geoweb slope protection and retaining walls were another potential treatment.
 - Division 14 stated the geoweb slope protection could be utilized on slopes within the viewshed of the AT but not in the direct vicinity of the AT.
 - US Forest Service (USFS) inquired about the stability of planting on a steep slope, and if heavy rainfall would wash the slope out.
 - NCDOT Geotechnical noted geoweb are currently utilized on steep slopes, and the cells are anchored at the top and backfilled with material. The vegetation once established is rooted into the soil beyond the geoweb.
 - NCDOT Geotechnical stated existing four-inch geoweb have not experienced washing out, however eight-inch geoweb have experienced sliding due to saturation.
- USFS noted they would provide a species list for planting.
- NPS noted interest in treating retaining walls in a manner that is feasible, could be easily maintained, and had a natural look and fit with the surrounding area.
 - NCSHPO noted it was understood retaining walls were needed and requested retaining wall treatment be durable and not fail.
- USFS and NPS requested additional information on treatments, including examples in Appalachia if possible and lifespan details.
- NCSHPO suggested not spending too much more time investigation detailed wall options because those details could be discussed later.
- Stantec stated the pedestrian bridge materials would have a weathered aesthetic which would be compatible with the surrounding environment.
 - NCSHPO inquired what the minimum clearance of the pedestrian bridge was, and the maximum height of the retaining wall underneath the pedestrian bridge.
 - *Post meeting information: Clearance underneath the pedestrian bridge to the road is 24.5 feet. The maximum retaining wall height underneath the bridge is 18.5 feet. There is 10 feet between the bottom of the pedestrian bridge superstructure and top of the retaining wall.*
- Division 14 noted after discussions with the Structures Management Unit and another NCDOT Division, that NCDOT does not have a policy requiring security fencing on top of pedestrian bridge railings. Municipalities may request security fencing.
 - NPS stated if not required they would prefer no security fencing due to aesthetic impacts but would need to confirm.
 - NCSHPO concurred. USFS concurred and noted security fencing was not required per USFS guidelines.

Design Option/Typical Section Discussion:

- NCSHPO stated they anticipate an Adverse Effect for AT regardless of treatment to retaining walls or the pedestrian bridge and inquired whether it was possible to minimize the typical section in the vicinity of the AT.
 - FHWA noted that while it is possible to reduce the footprint at the Trail, from a traffic perspective, it is not the ideal place to transition due to the crest of the curve.
 - Division 14 confirmed, stating there are two climbing lanes approaching a crest at the AT in order to bring larger vehicles up to speed. Ending a climbing lane early would force

large trucks and vehicles to merge into the same lane. Additionally, improvements to the horizontal sight distance at the AT may require impacts to the cut slopes even if the number of lanes is reduced to two.

- NCHPO stated they understood it was not desirable but inquired whether it could be done, and that a potential reduction in typical section to two-lanes may result in a *de minimis* call.
- Stantec noted the transition area occurs along the 1,400-foot retaining wall in the curve.
- Division 14 noted the climbing lane section is 4.0 miles and spans from NC 28 to Cheoah. Removing the climbing lanes in the section would not meet the P&N.
- Division 14 stated the design team would analyze minimizing the typical section in the vicinity of the AT but noted even reducing the typical section to two lanes would likely result in retaining walls and impacts due to shoulder improvements.
- USFS noted the SW-1A design option had the least impacts to their resources and would prefer SW-1A over the improve existing.
 - NPS inquired if the improve existing design option had greater impacts than SW-1A, and if so, this would not be their preferred.
- FHWA noted their decision for a recommended alternative had not been made yet.

Next Steps/Action Items:

- Completion of the tunnel feasibility report by end of April.
- AT Effects Meeting scheduled for April 30.
- USFS to provide a species list for planting.
- Stantec to investigate reducing the typical section in the vicinity of the AT.
- Core Team to prepare additional documentation/technical specifications on retaining wall treatment examples (in Appalachia, if possible) and lifespan information.

Meeting Attendees:

Monte Matthews, USACE	Donna Dancausse, FHWA
Crystal Amschler, USACE	Wanda Austin, NCDOT
Clarence Coleman, FHWA	Jay Twisdale, TGS
Aaron Williams, FHWA	Stacy Oberhausen, TGS

Purpose: This meeting was scheduled to discuss and review competing resources, Historic Architectural and jurisdictional waters, with the USACE.

General Discussion:

- Email received from Graham County Commissioner on March 9, 2020 requesting the addition of sidewalks along NC 28 from Hyde Town Road to Stecoah Road
 - USACE inquired if the pedestrian facilities could be removed from the A-0009C project and proceed as a stand-alone project
 - NCDOT responded in the affirmative; however, local jurisdictions prefer to include Complete Streets components during one project.
 - A stand-alone project would be funded through the Department's STI process and NCDOT has not tested the project to know what it would score.
 - Sidewalk/multi-use path is not identified in the 2015 Graham County Comprehensive Transportation Plan
 - NCDOT required to evaluate per Complete Streets Policy
- Graham County Commissioners Board voted to support Improve Existing as the preferred alternative
- NCDOT and FHWA are delaying decisions regarding their recommended alternative until completion of the Tunnel Feasibility Study and additional coordination with Tribal partners
 - NCDOT notes a decision may need to be made prior to completion of Tribal coordination due to COVID 19 pandemic

Sweeten Creek Road

- Three historic architectural resources (45,46, & 47) between hydraulic sites 7 & 8
- Retaining wall proposed along NC 143 to minimize impacts to Sweetwater Creek and avoid historic resources
- USACE suggested NCDOT continue the current path
 - Discuss further after Section 4(f) is completed
 - May need to review a reduced typical

Stecoah Creek

- Stecoah Creek appears to have been relocated to its current location
- The current typical of a 4-foot paved shoulder and 4-foot grass shoulder is wide enough for a curb and gutter section with a sidewalk behind the curb and gutter
- Stecoah Creek is classified as trout
- NCDOT will be able to minimize impacts to Stecoah Creek during final design without impacting the Stecoah Diner; goal is to avoid impacts to Stecoah Diner, Stecoah Creek and pond by holding the existing edge of pavement on the south and shifting the roadway footprint to the north

- NCDOT asked if a resource needed to be impacted would USACE have a preference for impacts to the pond or Stecoah Creek? NCDOT asked that if Stecoah Creek was relocated, could a multi-use path be built in the stream buffer?
 - USACE stated:
 - May need to review a reduced typical
 - Need to know proposed impacts associated with proposed sidewalk to make a decision on the location of a pedestrian facility in the buffer
 - Easier to justify impacts to a pond over a trout stream
 - Cautioned NCDOT regarding relocating Stecoah Creek
 - Must consider water quality and function of stream
 - May need to pay for mitigation

NCDOT STIP No. A-0009C

Environmental Advocacy Stakeholders Meeting

05.05.2020, 3:00pm

Attendees

Wanda Austin (NCDOT Division 14)

Callie Moore (Mountain True)

Dave McHenry (NCDOT Division 14)

Stacy Oberhausen (TGS)

Anne Burrows (NCDOT)

Jay Twisdale (TGS)

Hugh Irwin (Wilderness Society)

Amy Sackaroff (Stantec)

Melanie Mayes (WaysSouth)

Emily Love (Stantec)

Purpose: This meeting was scheduled to provide attendees with a project update and discuss a potential wildlife crossing.

Project Update:

- Division 14 provided an update on the grant applications and noted NCDOT upper management did not choose A-0009C for the INFRA grant.
- NCDOT is submitting A-0009C for a \$25 million BUILD grant. Division 14 noted ITS and fiber are included in the grant application.
 - Division 14 stated Balsam West currently provides fiber connections in Graham County from Topton to Robbinsville, but there is no connection from Robbinsville to Stecoah at present.
 - The Wilderness Society inquired whether this would provide internet to others in the area via connection to a subline.
 - Division 14 confirmed.
- Division 14 noted a tunnel feasibility report had been prepared for the project which includes a tunnel cost estimate. The tunnel cost estimate exceeds the amount of money available for A-0009C through the Appalachian Development Highway System (ADHS) funds, and would exceed one and a quarter of the future STIP funding cycles. Additionally, the operations and maintenance cost of a tunnel would be approximately 15% of NCDOT's overall operations and maintenance budget.

Potential Wildlife Crossing:

- The Wilderness Society noted concerns for wildlife in the area and inquired about a potential for a crossing.
- Division 14 noted in the vicinity of the Appalachian Trail (AT) the typical section includes a climbing lane in both directions.
 - WaysSouth noted concerns for hiker safety with the wider cross-section.
 - Division 14 noted the pedestrian bridge is included in the design thus eliminating hikers crossing the road.
- Division 14 stated coordination with the AT stakeholders was ongoing, and current discussions included aesthetic and vegetative treatments to retaining walls.
 - The Wilderness Society noted concerns over the use of retaining walls, stating the walls would be a barrier for animals introducing habitat fragmentation
- TGS noted concerns over a combined pedestrian bridge and wildlife crossing structure.
 - NCDOT noted agreement with concerns over a combined structure.

- The Wilderness Society noted concerns wildlife would not use a pedestrian bridge to cross.
- Division 14 inquired whether the group had cost estimates and noted concerns over constructability.
 - The Wilderness Society estimated a wildlife crossing would cost approximately \$1 to \$5 million, and recommended speaking to Tony Clemonger, a consultant.
 - The Wilderness Society noted Federal Transportation bill included funding for wildlife crossings and inquired if NCDOT had pursued this option.
 - NCDOT noted the funding had not passed and was uncertain of the timing of legislation.
- Mountain True noted Travis Wilson with Wildlife Resource Commission (WRC) was interested in a pedestrian crossing here.
 - Stantec noted WRC is a member of the project merger team and coordination was ongoing.
- Division 14 inquired whether Stecoah Gap was a priority area for a wildlife crossing.
 - The Wilderness Society confirmed, noted WRC has flagged this area for important wildlife habitat.
- Stantec inquired about the potential use for heat sensing flashers to warn drivers of potential wildlife or associated techniques.
 - The Wilderness Society stated these systems were used in the western part of the country and had been most successful for herd detection instead of single animal detection that is likely at Stecoah Gap.
- Stantec inquired whether there were grant or additional funding opportunities.
 - NCDOT noted a competition funded by the Western Transportation Institute.
 - NCDOT noted a Senate bill that could provide financial assistance and offered to provide the group with a link for more information.
- The Wilderness Society inquired if the BUILD grant could be used for wildlife crossings.
 - NCDOT noted it could however the application is due May 18, 2020 and the likelihood of having cost estimates and complete a constructability review prior to submission is not promising.
- Waysouth inquired how the group can be assistance to the A-0009C project team.
 - NCDOT responded continue the open communication and collaboration of ideas.
 - The Wilderness Society noted conversations with USFS would be possible.
 - TGS/Stantec noted this would be beneficial to the project.

Next Steps/Action Items:

- NCDOT to provide group with Senate bill information that could provide financial assistance for a wildlife crossing.
- BUILD grant submittal by May 18, 2020.
- Draft Environmental Assessment and Section 4(f) document are currently being prepared and will go to public review in the coming months.

Attendees

Crystal Amschler (USACE)	Jamie Lancaster (NCDOT EAU)
Monte Matthews (USACE)	Matt Wilkerson (NCDOT Archaeology)
Aaron Williams (FHWA)	Damon Jones (NCDOT Archaeology)
Clarence Coleman (FHWA)	Mary Pope Furr (NCDOT Historic Architecture)
David Muller (FHWA)	Jody Kuhne (NCDOT Geotechnical)
Claire Ellwanger (USFWS)	Marissa Cox (NCDOT Biological Surveys)
Amy Mathis (USFS)	Derrick Weaver (NCDOT EPU)
Amanetta Somerville (USEPA)	John Jamison (NCDOT EPU)
Elizabeth Toombs (Cherokee Nation)	Mike Sanderson (NCDOT EPU)
Wanda Austin (NCDOT Division 14)	Carla Dagnino (NCDOT ECAP)
Josh Deyton (NCDOT Division 14)	Lucious McEachin III (NCDOT Noise & Air)
Dave McHenry (NCDOT Division 14)	Nidhi Sheth (NCDOT Noise & Air)
Ted Adams (NCDOT Division 14)	Harrison Marshall (NCDOT Community Studies)
Steve Williams (NCDOT Division 14)	Kevin Fischer (NCDOT Structures)
Kevin Mitchell (NCDWR)	David Hinnant (NCDOT Visualization)
Amy Chapman (NCDWR)	Donna Dancausse (Facilitator)
Robert Patterson (NCDWR)	Stacy Oberhausen (TGS/NCDOT PM)
Marla Chambers (NCWRC)	Jay Twisdale (TGS)
Renee Gledhill-Early (NCSHPO)	Randy Henegar (TGS)
Rose Bauguess (Southwestern RPO)	Jimmy Terry (TGS)
Tom Smith (ARC)	Amy Sackaroff (Stantec)
Jim Dunlop (NCDOT Congestion Management)	Steve Smallwood (Stantec)
Pam Cook (NCDOT TPD)	Emily Love (Stantec)
Roger Santamaria (NCDOT TPD)	Thomas Hoppe (Stantec)

Purpose: This merger meeting was scheduled to revisit and gain concurrence on Concurrence Point 2 (CP 2) (Detailed Study Alternatives Carried Forward).

- Division 14 reviewed the purpose of the meeting, stating NCDOT's current recommendation was to remove design options S-2, SW-1A, R-1E, and R-1E Refined from further study.
- Division 14 reviewed why a revisit of CP2 was necessary due to the new information provided by the many reports and technical studies completed since October 2019 and procedurally valid according to NCDOT's merger process.
- Division 14 stated the cost estimates and the tunnel feasibility along with coordination efforts led NCDOT to make the recommendations presented today.
- Division 14 stated a tunnel feasibility study was prepared which indicated the tunnel design

options were not fiscally practicable.

- Division 14 briefly introduced the guest speakers: Dan Muller, FHWA; Tom Smith, ARC; and Steve Williams, NCDOT.

Project Update: Division 14 briefly reviewed the decision made at the October 9, 2019 CP2 meeting as well as the design options introduced since October 2019. Division 14 introduced the new nomenclature of the Design Alternatives used in the Environmental Assessment and the presentation. Division 14 provided a brief project update, noting additional studies and reports have been completed since the October 9, 2019 CP2 meeting which are available on the project FTP and NCDOT Connect sites. Division 14 stated that making the decision now prior to presenting alternatives to the public, reduces confusion or expectations of alternatives that are not practicable either from a constructability or financial basis. The cost of the tunnels while still being analyzed, appears to be cost prohibited. Additionally, NCDOT does not desire to present any alternative to the public that may be feasible but not fiscally practicable.

Appalachian Regional Council (ARC) Funding Update: ARC presented a funding update on the Appalachian Development Highway System (ADHS).

- ARC noted from 1999 to 2012 a considerable amount of funding was provided to the ADHS program, but in 2012 there was a loss of dedicated funding.
- ARC stated last year Congress provided additional dedicated funding in a yearly Appropriations bill for the ADHS and North Carolina received \$11 million. However, there is no promise that additional dedicated funding will be received in the future.
- ARC validated that North Carolina's entire remaining ADHS fund balance is \$206.5 million.

Tunnel Operation Costs & Considerations: FHWA provided an overview of the national tunnel inventory, including tunnels located across the country. Division 14 presented cost estimates for the A-0009C alternatives, including tunnel cost estimates.

- FHWA noted the proposed tunnels for A-0009C are unique in that they include a single bore with two lanes of traffic, and only five tunnels across the country have similar specifications. Four of the five tunnels include detour routes that are 99 miles or longer.
- FHWA presented maintenance costs for various tunnels across the country, which included annual staff costs of \$2 million or higher.
- Division 14 reviewed cost estimates for the A-0009C alternatives, including a tunnel cost estimate of \$217 million for S-2 and \$262 million for SW-1A.
- Division 14 provided a review of the estimated operations and maintenance costs for A-0009C which were based on case studies from Virginia DOT and adapted for the project. These estimates included approximately \$0.04 million for Improve Existing, \$4.17 million for S-2, and \$4.04 million for SW-1A. As part of the operations and maintenance cost estimate for S-2, approximately \$0.13 million is estimated for bridge maintenance, not including snow and ice systems.
 - Based on Division 14's annual \$25 million annual maintenance allocation for 8,000

roadway miles, maintenance for S-2 or SW-1A would impact over 16% of the total budget. Improve Existing would impact 0.16% of the annual maintenance budget.

NCDOT Funding: Division 14 reviewed the Strategic Transportation Investments (STI) funding process.

- Division 14 noted 40% of funds go to statewide mobility, and funding cascades to regional (30%) and division (30%) projects.
- Division 14 stated funding provided at a regional level is based on the percentage of the statewide population, and that Divisions 13 and 14 are paired together.
- Division 14 noted preliminary scores of the design options indicated Improve Existing scored 16.43, SW-1A (tunnel only) scored 5.78 and SW-1A and S-2 scored 5.78. Projects that are typically prioritized score approximately 20.
- Division 14 stated the cost of the tunnel lowers the benefit cost ratio in the scoring criteria resulting in the lower preliminary score.
- Division 14 noted the cost of a tunnel project would utilize over one funding cycle in STI for Division 14 Division Needs Category.

Design Options: TGS/NCDOT Project Manager (PM) reviewed each of the design alternatives and options.

- TGS/NCDOT PM stated the NC 28 relocation design option was an attempt to relocate NC 28 from an area blocked from sunlight, proving unsafe during winter weather. This design option was studied at the request of local residents and the environmental advocacy stakeholders. However, the design option diverted watershed drainage, land locked large tracts of land, and did not improve 8% grade on existing NC 28. For these reasons, this design option was dropped from further study.
- TGS/NCDOT PM reviewed the S-2 design option, which traverses an area with a high potential for acidic rock and unstable soil. The northern tunnel portal is shallow, posing constructability issues. The southern tunnel portal would acquire three residences on tribal lands. The design option impacts an Indiana bat roost. S-2 includes two 1,000+ foot long curved bridges over 100 feet tall.
- TGS/NCDOT PM stated the SW-1A design option originated from coordination with the environmental advocacy stakeholder group and includes a new location tunnel underneath the NC 143 and the AT. The southern tunnel portal impacts three residences on tribal lands.
- FHWA stated in a February 2020 meeting, the tribes noted relocating residences is difficult due to a lack of trust land, and noted they maintain an existing land list for tribal members in need of relocation.
- TGS/NCDOT PM reviewed the R-1E design option, which would direct traffic on a new alignment along Five Point Road (SR 1275) from US 129 to NC 143. This design option is included in the Graham County Comprehensive Transportation Plan and impacts the Trail of Tears. R-1E is not supported by local officials.
- TGS/NCDOT PM stated the R-1E refined design option was developed to address the floodplain impacts associated with R-1E. After preliminary detailed modeling of R-1E, R-1E refined was no

longer warranted and failed to receive support from local officials.

- The United States Army Corps of Engineers (USACE) asked for an explanation of why the 2019 CP2 table included 0 stream impacts for R-1E and 137 linear feet of stream impacts for improve existing; however, impacts in the current CP2 table were reversed.
 - Division 14 noted stream “SFE” was mistakenly not identified in the field, at the time of the October 2019 CP2 meeting (see below image). The stream has subsequently been added to the Natural Resources Technical Report (NRTR) and Jurisdictional Determination (JD), and as such, the impact tables have been updated accordingly. Additionally, the 2+1 typical section was not correctly identified at the October 2019 CP2 meeting and the major crossing on NC 143 was removed during design refinement. The accumulation of these modifications is reflected in the current CP2 impact table.



- The Wildlife Resource Commission (WRC) inquired whether the team could retain all the alternatives in the environmental document, identify a recommended alternative, and proceed to a Least Environmentally Damaging Practicable Alternative (LEDPA).
 - TGS/NCDOT PM stated it was not possible to proceed to CP3 prior to a Public Hearing and the USACE public notice in the Merger Process. It was explained that all Build alternatives presented in the Environmental Assessment must be presented at the Public Hearing, an in good faith NCDOT strives to not present alternatives to the public that could not or would not be constructed.
 - FHWA stated that NCDOT Division 14 leadership and FHWA leadership met to discuss the tunnel alternatives after the Tunnel Feasibility Study. FHWA and NCDOT both agreed that it would not be the best decision to show alternatives to the public that NCDOT cannot afford to build.

Recommendations: Division 14 provided a review of recommendations for alternatives to carry forward for detailed study.

- Division 14 noted Alternative 1 (Improve Existing) meets the purpose and need, has the lowest operations and maintenance costs, addresses locally identified ‘hot spots’, provided sufficient capacity, the lowest number of relocations, and was supported by the public, local officials, and environmental and resource agencies. For these reasons, Division 14 recommends retaining this

alternative.

- Division 14 stated Alternatives 2, 5, and 8 (S-2 included new location portions which would contribute to habitat fragmentation, a high number of relocations, adverse community cohesion effects, and had constructability issues associated with the proposed bridges and tunnel. In addition, the operations and maintenance estimate will likely increase and the cost of construction exceeds the biannual allocation for STI funding for Division Needs Category for Division 14. These alternatives are not recommended to be retained.
- Division 14 stated Alternatives 3, 6, and 9 (SW-1A) minimized impacts to National Forest System (NFS) lands, minimized visual impacts from viewpoints on the AT, but the operations and maintenance estimate will likely increase and the cost of construction exceeds the biannual allocation for STI funding for Division Needs Category for Division 14.. These alternatives are not recommended to be retained.
- Division 14 noted Alternatives 4 and 7 (R-1E) included direct impacts to historic architectural and archaeological sites and had a high number of residential and commercial relocations. These alternatives are not recommended to be retained.
- USACE inquired whether there would be any Section 4(f) impacts associated with the AT.
 - FHWA stated the Section 106 process is currently underway. FHWA would use the Section 106 determinations to help guide their decisions with Section 4(f). Until Section 106 is concluded, 4(f) determinations cannot be made. The Section 106 Effects meeting is scheduled for June 1st.
- WRC inquired whether impacts were anticipated with the Trail of Tears.
 - TGS/NCDOT PM stated no impacts were anticipated with the Improve Existing Alternative, only minimal resurfacing in the area along US 129.
- North Carolina State Historic Preservation Office (NCHPO) stated they would abstain from concurrence as adverse impacts on Section 106 resources are anticipated with the improve existing design option. These in turn will trigger Section 4(f).
 - NCHPO inquired whether the CP2 meeting could be held after the June 1 Section 106 effects meeting.
 - Division 14 declined, noting the May merger dates enables the project team to maintain the project schedule. The effects meeting is one of the final steps needed for completion of the EA.
- FHWA stated it was unfavorable to recommend or present alternatives to the public that cannot be built due to a lack of funding.
- USACE requested each signatory agency provide input on concurrence for CP2.
 - US Forest Service (USFS) stated a preference for SW-1A but agreement the alternative is not practicable due to funding. USFS defers to leadership for concurrence.
 - US Environmental Protection Agency (USEPA) noted concurrence.
 - US Fish and Wildlife Service (USFWS) noted concurrence.
 - Southwestern Rural Planning Organization (SWRPO) noted concurrence.
 - NC Division of Water Resources (NCDWR) noted concurrence.
 - NCHPO abstained from concurring.

- FHWA noted concurrence.
- Division 14 noted concurrence.
- WRC noted concurrence.

Action Items:

- USACE requested information on the improve existing and R-1E stream impacts be included in the meeting minutes.

This summary is the writer's interpretation of the events, discussions, and transactions that took place during the meeting. Meeting participants are asked to provide any edits, additions and/or corrections to the A-0009C Core Team by June 16, 2020.

NEPA/404 MERGER TEAM MEETING AGREEMENT

Concurrence Point No. 2: Revised Design Alternatives for Detailed Study

WBS Element: 32572.1. FS10

FA No. APD-0074(178)

STIP Project Number: A-0009C

STIP Description: Corridor K Improvements along US 129, NC 143, and NC 28 from Robbinsville to Stecoah

The Merger Team concurred on this date of May 20, 2020, that the following alternatives be carried forward for detailed study.

- Alternative 1** – This option would maintain the existing alignment along US 129, NC 143, and NC 28. Improvements including right turn lane on US 129 at NC 143, widening, providing adequate shoulders, passing and climbing lanes, pedestrian bridge at the AT, pedestrian improvements in Robbinsville and modifying super-elevations (cross-slopes) to improve traffic flow.
- Alternative 2** – This option would maintain the existing alignment along US 129 and NC 143 to the tunnel portal then tunneling under NC 143 and the Appalachian Trail for 4,445 feet. The corridor then crosses NC 28 and NC 143 south of the existing intersection, turning northeast and following the north side of the Stecoah Valley before an improve existing segment and terminating at the at the four-lane section of NC 28. Improvements including right turn lane on US 129 at NC 143, widening, providing adequate shoulders, passing and climbing lanes, pedestrian improvements in Robbinsville and modifying super-elevations (cross-slopes) to improve traffic flow.
- Alternative 3** – This option would maintain the existing alignment along US 129 and NC 143 then continuing north and tunneling under NC 143 and the Appalachian Trail for 5,416 feet. The corridor includes an a-grade intersection of NC 28 and NC 143 before turning south where the remainder of the corridor improves existing NC 28, terminating at the at the four-lane section of NC 28. Improvements including right turn lane on US 129 at NC 143, widening, providing adequate shoulders, passing and climbing lanes, pedestrian improvements in Robbinsville and modifying super-elevations (cross-slopes) to improve traffic flow.
- Alternative 4** – This design option would provide a new location connection along the Five Points Road corridor to facilitate through movements at the US 129 and NC 143 intersection. New intersections with US 129 and NC 143 are being studied to include conventional T-intersections. This option would then follow NC 143 and NC 28. Improvements include widening, providing adequate shoulders, passing and climbing lanes, pedestrian bridge at the AT, pedestrian improvements in Robbinsville and modifying super-elevations (cross-slopes) to improve traffic flow.
- Alternative 5** – This design option would provide a new location connection along the Five Points Road corridor to facilitate through movements at the US 129 and NC 143 intersection. New intersections with US 129 and NC 143 are being studied to include conventional T-intersections. This option would then follow NC 143 to the tunnel portal then tunneling under NC 143 and the Appalachian Trail for 4,445 feet. The corridor then crosses NC 28 and NC 143 south of the existing intersection, turning northeast and following the north side of the Stecoah Valley before an improve existing segment and terminating at the at the four-lane section of NC 28. Improvements including, widening, providing adequate shoulders, passing and climbing lanes, pedestrian improvements in Robbinsville and modifying super-elevations (cross-slopes) to improve traffic flow.
- Alternative 6** – This design option would provide a new location connection along the Five Points Road corridor to facilitate through movements at the US 129 and NC 143 intersection. New intersections with US 129 and NC 143 are being studied to include conventional T-intersections. This option would then follow NC 143 then continuing north and tunneling under NC 143 and the Appalachian Trail for 5,416 feet. The corridor includes an a-grade intersection of NC 28 and NC 143 before turning south where the remainder of the corridor improves existing NC 28, terminating at the at the four-lane section of NC 28. Improvements including widening, providing adequate shoulders, passing and climbing lanes, pedestrian improvements in Robbinsville and modifying super-elevations (cross-slopes) to improve traffic flow.
- Alternative 7** – This design option would provide a new location connection along the Five Points Road corridor to facilitate through movements at the US 129 and NC 143 intersection. New intersections with US 129 and NC 143 are being studied to include roundabouts. This option would then follow NC

143 and NC 28. Improvements include widening, providing adequate shoulders, passing and climbing lanes, pedestrian bridge at the AT, pedestrian improvements in Robbinsville and modifying super-elevations (cross-slopes) to improve traffic flow.

Alternative 8 – This design option would provide a new location connection along the Five Points Road corridor to facilitate through movements at the US 129 and NC 143 intersection. New intersections with US 129 and NC 143 are being studied to include roundabouts. This option would then follow NC 143 to the tunnel portal then tunneling under NC 143 and the Appalachian Trail for 4,445 feet. The corridor then crosses NC 28 and NC 143 south of the existing intersection, turning northeast and following the north side of the Stecoah Valley before an improve existing segment and terminating at the at the four-lane section of NC 28.

Alternative 9 – This design option would provide a new location connection along the Five Points Road corridor to facilitate through movements at the US 129 and NC 143 intersection. New intersections with US 129 and NC 143 are being studied to include roundabouts. This option would then follow NC 143 then continuing north and tunneling under NC 143 and the Appalachian Trail for 5,416 feet. The corridor includes an a-grade intersection of NC 28 and NC 143 before turning south where the remainder of the corridor improves existing NC 28, terminating at the at the four-lane section of NC 28.

No Build

Design Study Alternatives have been combined from the options presented at the October 9, 2019 CP2 meeting to reflect complete corridors to aid in comparison of impacts in the Environmental Document (EA).

DESIGN OPTIONS KEY:

- Improve Existing US 129 / Improve Existing NC 143 / Improve Existing NC 28 ➡ Alternative 1
- Improve Existing US 129 / Improve Existing NC 143 / S-2 ➡ Alternative 2
- Improve Existing US 129 / Improve Existing NC 143/SW-1A / Improve Existing NC 28 ➡ Alternative 3
- R-1E Intersection / Improve Existing NC 143 / Improve Existing NC 28 ➡ Alternative 4
- R-1E Intersection / Improve Existing NC 143 / S-2 ➡ Alternative 5
- R-1E Intersection / Improve Existing NC 143 / SW-1A / Improve Existing NC 28 ➡ Alternative 6
- R-1E Roundabout / Improve Existing NC 143 / Improve Existing NC 28 ➡ Alternative 7
- R-1E Roundabout / Improve Existing NC 143 / S-2 ➡ Alternative 8
- R-1E Roundabout / Improve Existing NC 143 / SW-1A / Improve Existing NC 28 ➡ Alternative 9

USACE	DocuSigned by: <i>Crystal Amschler</i> Crystal Amschler 66C05A077D234BC...	5/20/2020 Date	NCDWR	DocuSigned by: <i>Kevin Mitchell</i> Kevin Mitchell D9ACAD48D566453...	5/20/2020 Date
USFWS	DocuSigned by: <i>Claire Ellwanger</i> Claire Ellwanger 8489BB0BFB7B45D...	5/20/2020 Date	NCWRG	DocuSigned by: <i>Marla Chambers</i> Marla Chambers B1D3DCA076AD4C9...	5/22/2020 Date
USFS	_____ Amy Mathis	_____ Date	SHPO	_____ Renee Gledhill-Earley	_____ Date
RPO	DocuSigned by: <i>Rose Bauguess</i> Rose Bauguess 261D8411F03544C...	5/22/2020 Date	USEPA	DocuSigned by: <i>Amarretta Somerville</i> Amarretta Somerville 4A37089ED457408...	5/20/2020 Date
FHWA	DocuSigned by: <i>Aaron T. Williams</i> Aaron Williams C0454F3AA4374C6...	5/20/2020 Date	NCDOT	DocuSigned by: <i>Wanda Austin</i> Wanda Austin B88118F1E31C453...	5/20/2020 Date



North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

May 22, 2020

To: Mary Pope Furr, Architectural Historian mfurr@ncdot.gov
NCDOT/EAU/Historic Architecture

From: Renee Gledhill-Earley *RGE*
Environmental Review Coordinator

RE: Historic Structures Survey Report, Corridor K, Appalachian Highway Development System,
Robbinsville to Stecoah, A-0009C, Graham County,
ER 19-2538

Thank you for the above-referenced report for the proposed, federally funded undertaking. We received the report on April 20, 2020 via FedEx and offer the following comments.

For the most part, we agree with the consultant's assessments and boundaries. However, there are instances where we disagreed with their determination. In those cases, we have noted the relevant text in italics. In several examples, the boundary should extend to the edge-of-pavement to account for the historic relationship between the resource and the road.

We concur that the following properties are eligible for listing in the National Register of Historic Places.

Robbinsville Downtown Historic District (GH0230) - eligible for listing in the National Register of Historic Places under Criteria A and C that the boundary as illustrated on page 5-6 of the report is appropriate.

John and Mattie Colvard House (GH0238) - eligible for listing in the National Register of Historic Places under Criterion C. *We do not agree with the boundary as illustrated on page 6-6 of the report.* Because of the proximity of the house to the road, the eastern boundary should be the edge of pavement, rather than the tax parcel line, to account for the historic relationship of the house to the road to preserve integrity of setting.

Frank and Lenora Colvard House (GH0235) - eligible for listing in the National Register of Historic Places under Criterion C. *We do not agree with the boundary as illustrated on page 7-7 of the report.* Because of the proximity of the house to the road, the eastern boundary should be the edge of pavement, rather than the tax parcel line, to better incorporate the circular drive and account for the historic relationship of the house to the road to preserve the integrity of setting.

Colvard Motor Company (GH0236) - eligible for listing in the National Register of Historic Places under Criteria A and C. We agree with the boundary as illustrated on page 8-9 of the report.

Colvard House (GH0240) - eligible for listing in the National Register of Historic Places under Criterion C. We agree with the boundary as illustrated on page 9-9 of the report.

J. Boyd Crisp House (GH0242) - eligible for listing in the National Register of Historic Places under Criterion C. *We do not agree with the boundary as illustrated on page 10-2 of the report.* Because of the proximity of the house to the road, the eastern boundary should follow the edge of pavement, rather than the tax parcel line, to account for the historic relationship of the house to the road to preserve integrity of setting.

The Hut (GH0204), which was placed on the National Register Study List in February 2019, remains eligible for listing in the National Register under Criteria A and C. We agree with the boundary as illustrated on page 14-5 of the report.

Robbinsville First Baptist Church (GH0203), which was placed on the National Register Study List in February 2019, remains eligible for listing in the National Register under Criterion C. We agree with the boundary as illustrated on page 15-7 of the report.

Old Mother Church and Cemetery (GH0048) - eligible for listing in the National Register of Historic Places under Criterion A for the significance of the cemetery. We agree with the boundary as illustrated on page 17-9 of the report.

Delmas and Mary Ruth Shuler House (GH0257) - eligible for listing in the National Register of Historic Places under Criterion C. We agree with the boundary as illustrated on page 19-6 of the report.

Patton Gwynn Denton House (GH0264) - eligible for listing in the National Register of Historic Places under Criterion C. We agree with the boundary as illustrated on page 21-6 of the report.

Cody House (GH0263) - eligible for listing in the National Register of Historic Places under Criterion C. We agree with the boundary as illustrated on page 22-8 of the report.

John and Ruby Cody House (GH0261) - eligible for listing in the National Register of Historic Places under Criterion C. *We do not agree with the boundary as illustrated on page 23-7 of the report.* A notable, character-defining landscape feature of the property are the native stone retaining walls that line the driveway. A portion of these walls lie outside the proposed boundary and in the Sweetwater Road right-of-way. The boundary for the eligible resource should follow the recommendation on the northeast, southeast, and southwest sides. *The northwestern boundary should extend to the edge-of-pavement along Sweetwater Road to ensure that it includes the full extent of the native stone retaining walls.*

John A. Cody House (GH0043) - eligible for listing in the National Register of Historic Places under Criterion C. We agree with the boundary as illustrated on page 24-13 of the report.

Cheoah Historic District (GH0347) - is. To begin, the map on page 25-2 includes two resources (GH0043 Cody House, GH0268 Phillips House) that were specifically excluded from the district, per the explanation on page 25-1. The following resources remain:

- Floyd Crisp House (GH0252) – contributing
- Sweetwater Baptist Church (GH0012) – contributing
- Shope House (GH0266) – contributing
- Dwelling, circa 1975 – non-contributing
- Agricultural Building, deteriorated – non-contributing
- Molt Rice House barn (GH0053) – while the house is gone, the barn would still be considered a contributing resource in the historic district.

Earnest Phillips Road – The original roadbed, long since bypassed by Sweetwater Road, would also be considered a contributing feature. That the new alignment diverged to the north, instead of widening and improving the original road, means that the transportation network remains largely intact. Considering the importance of rural roads, Beech Creek Road may also be considered a contributing feature.

The 1949 construction of the Sweetwater Baptist Church, which is considered to be a contributing resource in the rural historic district, suggests that a period of significance for the Cheoah Historic District would extend at least to 1950. Considering that the Cheoah School and the former store building on the southwest corner of the intersection of Earnest Phillips and Beech Creek Road were both gone by or in the 1940s, these losses occurred within the historic period and can be documented as part of the evolution of the rural hamlet. This is particularly the case for the school, whose removal likely followed the regional and even statewide trend of school consolidation during the second quarter of the twentieth century. Therefore, the sites of these non-extant resources cannot be considered non-contributing. Loss of the mill is perhaps more impactful, especially if it occurred after the historic period. However, the land disturbance in the area of the late-twentieth-century agricultural building appears to be nominal, and archaeological research may reveal information about the location, size, and operation of the mill. Therefore, the mill site should not be considered non-contributing.

We recommend that the Cheoah Historic District as eligible for listing in the National Register of Historic Places under Criterion A in the area of exploration/settlement, with a boundary that includes the above-referenced contributing resources. *We do not agree with the boundary as illustrated on page 26-5 of the report, because the tax parcel, which was used as the recommended boundary, clips the east side of the building. Instead, the east side of the boundary should extend eastward to include the double-loaded section of adjacent parking lot.*

Randolph-Stewart House (GH0272) - eligible for listing in the National Register of Historic Places under Criterion C. *We do not agree with the boundary illustrated on page 31-10 of the report.* While the west side of the recommended boundary is sufficient to incorporate the historic resources of the property, the eastern boundary should follow the edge of pavement, rather than the parcel line, to account for the historic relationship between the buildings and Sweetwater Road.

Appalachian National Scenic Trail (NC0007) - remains eligible since its determination of eligibility in 2009 with no recommended changes to the boundary as it appears on page 32-3 of the report.

Stecoah School (GH0025) - eligible for listing in the National Register of Historic Places under Criteria A and C. We agree with the boundary as illustrated on page 36-12 of the report, which includes the school, gymnasium, teachers' home, shop, and garage as contributing resources and the non-historic fire station as a non-contributing resource.

Stecoah Baptist Church (GH0026) - eligible for listing in the National Register of Historic Places under Criterion C. We agree with the boundary as illustrated on page 38-8 of the report.

Boxed House (GH0349)

We do not concur that the Boxed House (GH0349) is not National Register-eligible. The assessment on page 43-4 notes the changes that resulted from the move and states that the Sawyer Boxed House (GH0004) and the Log and Boxed House (GH0027) are "two intact boxed houses." However, on page 3-40, the report states that the Sawyer Boxed House "...built between 1916 and 1930...has been subject to heavy alterations and additions. If the latter statement about the Sawyer Boxed House (GH0004) is correct, then its status as a comparable property actually elevates the significance of the subject Boxed House (GH0349). Although the roof structure was altered with the move in the 1940s, and the porch incorporated at that time, the house otherwise appears to be substantially intact, particularly on the interior. Boxed House interiors are rarely intact to illustrate the early period of construction. Aside from the circa 1945 roof, the profile of which is not

especially different from those of other boxed houses, and the porch—both of which are alterations dating from the circa 1945 move—the house retains a sufficient degree of integrity to warrant a determination of National Register eligibility under Criterion C. Because the dwelling's eligibility derives from its architectural significance, it meets Criteria Consideration B. That the Boxed House is not original to this location means that a smaller boundary that does not necessarily require incorporating view sheds and the relationship to the road can be drawn around the resource.

Barring additional information that may be provided later, and require reconsideration, we concur that the following properties are not eligible for listing in the National Register of Historic Places for the reasons outlined in the report.

- **Ted and Reba Jordan House (GH0239)**
- **James and Betty Phillips House (GH0244)**
- **Kay Calvin and Hilma Keever House (GH0248)**
- **Farmers Home Administration House (GH0317)**
- **W.J. Carringer House (GH0255)**

- **Paul Millsaps House (GH0323)**
- **Phillips House (GH0268)**
- **Bob and Melba Edwards House (GH0277)**
- **Harvey and Faye Crisp House (GH0294)**
- **Bill Crisp House (GH0287)**
- **Jenkins House (GH0285)**
- **Joseph Edwards House (GH0035)**
- **Walt and Joan Hyde House (GH0306)**
- **Stecoah Valley Camping Resort (GH0298)**
- **Edwards Campsite (GH0300)**
- **Billy Holder House (GH0301)**
- **Hershel and Barbry McCracken House (GH0302)**

The above comments are offered in accordance with Section 106 of the National Historic Preservation Act and the regulations of the Advisory Council on Historic Preservation at 36 CFR 800. If you have any questions concerning them, please contact me at 919-814-6579 or renee.gledhill-earley@ncdcr.gov Thank you.

cc: Aaron Williams, FHWA
Clarence Coleman, FHWA
Wanda Austin, NCDOT/Div. 14
Amy Mathis, USFS

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NCDOT STIP No. A-0009C

Effects Meeting

06.01.2020, 12:00pm

Attendees

Wanda Austin (NCDOT Division 14)

Dave McHenry (NCDOT Division 14)

Jamie Lancaster (NCDOT Cultural Resources)

Mary Pope Furr (NCDOT Cultural Resources)

Matt Wilkerson (NCDOT Cultural Resources)

Damon Jones (NCDOT Cultural Resources)

Aaron Williams (FHWA)

Clarence Coleman (FHWA)

Renee Gledhill-Early (NCHPO)

Crystal Amschler (USACE)

Denise Nelson (NPS)

Amy Mathis (USFS)

Joel Hardison (USFS)

Erik Crews (USFS)

Elizabeth Toombs (Cherokee Nation)

Morgan Sommerville (ATC)

Donna Dancausse (Facilitator)

Stacy Oberhausen (TGS)

Jimmy Terry (TGS)

Jay Twisdale (TGS)

Ellen Turco (RGA)

Amy Sackaroff (Stantec)

Mike Lindgren (Stantec)

Steve Smallwood (Stantec)

Thomas Hoppe (Stantec)

Emily Love (Stantec)

Purpose: This meeting was scheduled to discuss Section 106 Effects determination for the Appalachian Trail and historic architectural resources recommended eligible for the National Register of Historic Places (NRHP).

Appalachian Trail:

- Stantec noted the proposed four-lane typical section in the vicinity of the Appalachian Trail (AT) includes two through lanes and climbing lanes in both directions.
- NCHPO stated this would be an Adverse Effect.
 - NCDOT Cultural Resources referenced the adjacent retaining wall on the north side of NC 143 as contributing to the adverse effect call.
 - Stantec noted the retaining wall was approximately 1,300-feet long and had a maximum height of 30 feet; however, the wall has a maximum height of 25 feet within the vicinity of the AT.
 - Division 14 inquired reasoning behind the adverse effect call.
 - SHPO noted the adverse effect call is due to the extra lanes and walls at the AT. SHPO stated an alternate design had not been presented.
 - Division 14 referenced the meeting packet provided which included a two-lane cross section.
- NCHPO noted a comparison between the existing two-lane section and proposed four lane cross section.
- Facilitator requested confirmation that visual effects were contributing to the adverse effect call, and inquired whether the retaining walls, additional travel lanes, or both were contributing to visual effects.
 - NCHPO stated it appeared both the two-lane and four-lane typical sections required retaining walls, and even geocell retaining walls would not change the adverse effect call on the AT.

- NCDOT Cultural Resources inquired whether retaining walls were needed on the two-lane option.
 - Stantec stated for the two lane option the average height of the retaining wall on the north side of NC 143 was 10 feet for a length of 2,0008 feet with a maximum height of 30 feet, but the height was approximately 3.5 feet in the vicinity of the AT.
- USFS noted their understanding was a two-lane cross section was not feasible.
 - Stantec stated from a design standpoint climbing lanes are preferable.
 - USFS requested a rendering of the two-lane typical section to assess visual effects from the AT.
 - *Post meeting clarification: The two-lane design option does not meet the purpose and need of the A-0009C project. As such, a rendering will not be prepared.*
- USFS inquired whether a wildlife crossing was proposed rather than a pedestrian bridge.
 - Stantec stated the Core Team is analyzing both a pedestrian bridge and wildlife crossing.
 - USFS requested a rendering of the potential wildlife crossing to assess visual effects from the AT.
- USFS noted the agency was waiting on a Supreme Court decision on which agency maintains the AT corridor.
- Facilitator stated it appeared there were two effects calls being carried forward:
 - Four-lane improve existing: **Adverse effect**
 - Two-lane improve existing: **No adverse effect, de minimis 4(f)**
 - NCDOT Cultural Resources, NCHPO, and FHWA concurred.
- NCDOT Cultural Resources inquired whether there were considerations for a turning lane into the parking lot.
 - Division 14 stated based on traffic studies, a turning lane was not warranted at this location. Additionally, a turn lane poses safety concerns for vehicles accelerating and trucks merging slowly at a speed of 20 mph, which would be addressed by climbing lanes in this area.

Historic Architecture Resources:

- John and Mattie Colvard House, Survey Site No. GH0238 (NCDOT Survey No. 9)
 - Stantec inquired whether the design could be shortened, which would eliminate impacts to this resource. Stantec noted the project terminus further south was due to R-1E roundabout tying into existing grade, which was eliminated at the May 20 CP2 meeting.
 - NCDOT Cultural Resources inquired whether there was a benefit to keeping the current project terminus.
 - NCHPO noted for future A-0009 projects extending past Robbinsville, it would be beneficial to maintain the existing terminus.
 - It was thus decided to maintain the existing terminus.
 - NCHPO stated with tree protection the effects call would be a **Conditional No Adverse Effect** and *de minimis* for Section 4(f).

- Division 14 noted final surveys are currently underway, and tree impacts and protection efforts would be communicated to the group upon completion of surveys.
- NCDOT Cultural Resources stated the conditions of the Conditional No Adverse Effects call included:
 - NCDOT completing tree surveys
 - Minimizing the design to decrease impacts to trees
 - Removed trees will be replaced with balled/burlaped trees guaranteed to survive three years.
- NCDOT Cultural Resources noted there were several resources outside of the Area of Potential Effects (APE): Frank and Lenora Colvard House (GH0235, #10), Colvard Motor Company (GH0236, #11), Colvard House (GH0240, #12), and J. Boyd Crisp House (GH0242, #13).
 - NCHPO concurred.
 - FHWA concurred.
- The Hut, Survey Site No. GH0204 (NCDOT Survey Site No. 25)
 - NCHPO stated there was **No Effect** as there are no proposed construction activities within the historic property boundary and no impacts to the setting or viewshed.
 - FHWA concurred.
- Robbinsville First Baptist Church, Survey Site No. GH0203 (NCDOT Survey Site No. 26)
 - NCHPO stated there was **No Effect** as there are no proposed construction activities within the historic property boundary and no impacts to the setting or viewshed.
- Old Mother Church and Cemetery, Survey Site No. GH0048 (NCDOT Survey Site No. 29)
 - NCDOT Cultural Resources stated as R-1E was dropped during the CP2 revisit meeting, there was **No Effect**.
 - NCHPO and FHWA concurred.
- Delmas and Mary Ruth Shuler House, Survey Site No. GH0257 (NCDOT Survey Site No. 40)
 - NCDOT Cultural Resources stated there was **No Effect** as there are no proposed construction activities within the historic property boundary and no impacts to the setting or viewshed.
 - NCHPO and FHWA concurred.
- Patton Gwynn Denton House, Survey Site No. GH0264 (NCDOT Survey Site No. 45)
 - NCHPO inquired about the easement located on the property.
 - Stantec stated the Permanent Drainage Easement (PDE) included an existing pipe which will be replaced.
 - Stantec stated the Permanent Utility Easement (PUE) included a service line running adjacent to a private road and connected to a powerline. The PUE includes area to tie back into the slopes.
 - NCDOT Cultural Resources inquired whether there would be removal of trees or landscaping.
 - Stantec answered No.
 - NCDOT Cultural Resources stated there was **No Effect**, and *de minimis* for Section 4(f).
 - NCHPO and FHWA concurred.
- Cody House, Survey Site No. GH0263 (NCDOT Survey Site No. 46)

- Stantec stated there is a proposed PUE which includes a utility pole service line for constructability purposes.
- Stantec stated the design included shifting the road to the north away from the historic resource and a fill slope retaining wall.
- NCDOT Cultural Resources stated there was **No Adverse Effect** and a *de minimis* for Section 4(f) due to the permanent easement.
 - NCHPO and FHWA concurred.
- John and Ruby Cody House, Survey Site No. GH0261 (NCDOT Survey Site No. 47)
 - NCHPO noted there would be an adverse effect should the stone walls be impacted.
 - Stantec stated the proposed design does not impact the stone walls or driveway, and the roadway would be shifted to the north away from the resource.
 - NCDOT Cultural Resources inquired whether protective measures could be put in place to protect the stone walls.
 - Stantec answered Yes.
 - NCDOT Cultural Resources stated there was a **No Adverse Effect**.
 - NCHPO and FHWA concurred.
- John A. Cody House, Survey Site No. GH0043 (NCDOT Survey Site No. 50)
 - Stantec noted the design shifted north away from the resource and a PUE is required for a utility transmission line at the northeast corner of the property.
 - NCDOT Cultural Resources stated there was **No Adverse Effect** and a *de minimis* for Section 4(f) due to the PUE.
- Cheoah Historic District, Survey Site No. GH0347 (NCDOT Survey Site No. 109)
 - Boundary reviewed in meeting reflects boundary provided by NCHPO and includes Sweetwater Baptist Church, Floyd Crisp House, Shope House, Molt Rice House Barn, Earnest Phillips Road, and Beech Creek Road
 - Stantec noted easements were required to retain room for construction and noted a culvert replacement at Beech Creek was required in the western portion of the historic district which could include an onsite detour.
 - NCHPO inquired whether Earnest Phillips Road could be utilized as a detour route.
 - Stantec noted an analysis of the roadway grade and other existing conditions on Earnest Phillips Road would need to be completed to determine whether improvements are required to utilize as a detour.
 - Division 14 concurred, noting this was underway now.
 - *Post meeting clarification: Earnest Phillips Road is not entirely state maintained and not suitable as a detour.*
 - Stantec asked if improvements on Ernest Phillips Road are needed for a detour route, would this be allowed within the historic district.
 - NCDOT Cultural Resources noted improvements may be allowable should they not have overall negative impacts to the resource.
 - NCDOT Cultural Resources inquired whether a detour route to the south of NC 143 would be possible.
 - Stantec answered no, a detour would introduce a sharp turn, creating issues on the north side and temporary fill in Sweetwater Creek.

- Stantec inquired whether a bridge was assessed in addition to a culvert.
 - TGS Hydraulics affirmed.
- TGS Hydraulics stated a diversion canal could be utilized during construction of the box culvert to minimize impacts to the surrounding area.
- NCHPO requested a commitment to minimize tree cutting and restoration of landscape after the temporary detour route is removed.
 - Division 14 FHWA agreed with the commitment.
- NCDOT Cultural Resources noted driveway access at Shope House may be modified.
 - Division 14 stated the detour route could be tied into NC 143 prior to Shope House.
 - NCDOT Cultural Resources agreed, noting an environmental commitment would be added to the effects call.
- NCDOT Cultural Resources stated there would be **No Adverse Effect** with environmental commitments with a *de minimis* for Section 4(f).
 - Environmental commitments include:
 - Investigation of staged construction methods to minimize detour route footprint
 - Tying in the detour route to NC 143 prior to Shope House
 - Minimizing tree cutting and removal along the detour route
 - Restoration of landscaping to pre-construction appearance after completion of construction.
 - NCHPO and FHWA concurred.
- Randolph Stewart House, Survey Site No. GH0272 (NCDOT Survey Site No. 61)
 - NCDOT Cultural Resources inquired how tall the retaining wall was within the historic property boundary.
 - Stantec stated the maximum height along the historic property boundary was 6.3 feet with an average height of three feet, and the retaining wall was 800-feet long.
 - NCDOT Cultural Resources stated aesthetic treatments may need to be applied to the retaining wall to reduce visual effects.
 - NCHPO stated this was not necessary.
 - NCDOT Cultural Resources inquired whether a permanent easement was needed to maintain the retaining wall.
 - Stantec answered No, noting the retaining wall was within existing right-of-way (ROW).
 - Stantec stated a permanent utility easement and construction easement are located in the western portion of the property.
 - NCDOT Cultural Resources stated there was **No Adverse Effect** and *de minimis* for Section 4(f) due to the easements located within the property boundary.
 - NCHPO and FHWA concurred.
- Stecoah School, Survey Site No. GH0025 (NCDOT Survey No. 85)
 - NCDOT Cultural Resources stated there was **No Effect** as there are no proposed construction activities within the historic property boundary and no impacts to the setting or viewshed.

- NCHPO and FHWA concurred.
- Stecoah Baptist Church, Survey Site No. GH0026 (NCDOT Survey No. 87)
 - NCDOT Cultural Resources stated there was **No Effect** as there are no proposed construction activities within the historic property boundary and no impacts to the setting or viewshed.
 - NCHPO and FHWA concurred.
- Boxed House, Survey Site No. GH0349 (NCDOT Survey No. 227)
 - NCDOT Cultural Resources stated there was **No Effect** as there are no proposed construction activities within the historic property boundary and no impacts to the setting or viewshed.
 - NCHPO and FHWA concurred.

Action Items:

- Stantec to obtain rendering of wildlife crossing in the vicinity of the AT and provide to USFS for review.
- Division 14 to complete surveys and obtain tree inventory at John and Mattie Colvard House to determine impacts.
 - Potential for landscaping plan and tree impact minimization.

NCDOT STIP No. A-0009C

Bat and Warbler Update Meeting

06.11.2020, 1:00pm

Attendees

Dave McHenry (Division 14)

Claire Ellwanger (USFWS)

Janet Mizzi (USFWS)

Aaron Williams (FHWA)

Josh Adams (Stantec)

Amber Coleman (Stantec)

Alexa Kennedy (Stantec)

Purpose: To discuss the project schedule and determine how to proceed with consultation for Alternative 1 (Improve Existing US 129 / NC 143 / NC 28)

Discussion

- United States Fish and Wildlife Service (USFWS) noted they have discussed the project internally since the alternatives were narrowed down. USFWS is agreeable to proceeding informally with bats, so long as measures of winter tree clearing and no additional lighting are included. Details about cave and mine surveys should be included.
- USFWS noted the golden-winged warbler has been petitioned for listing and could impact the project timeline if it is listed. There are two pairs along the project that could potentially be affected. At this time, the team can proceed with a conference, as opposed to consultation, that will become effective if the species is listed. The conference will have the same elements as a regular consultation and would allow the project to continue in the event that the warbler becomes listed before or during construction.
 - Division 14 inquired about where the pairs were located
 - USFWS noted they are around the picnic area and powerline corridor near Stecoah Gap
 - Stantec noted the pairs are well documented
- FHWA asked USFWS that if the warbler becomes listed, would the formal consultation be covered by this conference opinion and could it be conducted in an email.
 - USFWS confirmed that the formal consultation could be done through email.
- USFWS noted that some of the dropped alternatives avoided impacts to the golden-winged warbler, so this would be the best course of action for Improve Existing
- Stantec noted that existing golden-winged warbler habitat is associated with the nearby powerline. There is potential to work with the utility company on management.
- USFWS noted they would like to see conservation measures incorporated into the conference. USFWS mentioned USFS conservation activities and suggested coordination.
 - Stantec noted they can review the nearby right of way adjacent to the existing population for potential habitat creation or maintenance.
- Division 14 inquired if impacts are being quantified now.
 - Stantec noted they are moving forward with this now that the recommended alternative has been selected

- Stantec noted that the conference opinion will not be finalized unless the species is listed
- Stantec inquired if two separate documents should be submitted for the bats and golden-winged warbler
 - USFWS noted they preferred to have them in the same document
- Stantec noted they will begin preparing the document and send potential conservation measures to NCDOT in the upcoming weeks
 - Division 14 noted there are opportunities for selective herbicides and regeneration of locusts
- USFWS noted they could turn around a Not Likely to Adversely Affect concurrence around within 30 days for the bats. USFWS would initiate formal conference on the golden-winged warbler at that time. They typically allow 135 days for this.
- Stantec and USFWS asked about the timeline of the environmental document
 - FHWA was unsure of the most recent schedule, but noted the Environmental Assessment was projected to be published in August. FHWA also noted that the Finding of No Significant Impact (FONSI) is typically issued at least 60 days after that. FHWA stated that the conference would be needed before the FONSI is signed.
 - Note: The timeframe on which the FONSI is issued will depend on the outcome of Section 4(f)



**North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

August 10, 2020

Aaron T. Williams, P.E.
Transportation & Safety Engineer, Divisions 10-14
U.S. Department of Transportation
Federal Highway Administration, North Carolina Division

aaron.williams@dot.gov

Re: Improve US 19-74, from Andrews Bypass to NC 28, A-9ABC, Graham County,
CH 96-0405

Thank you for your July 14, 2020, email transmitting the management summary documenting the archaeological investigations for the above-referenced project. We have reviewed the information provided and offer the following comments:

The management summary discusses 87 archaeological sites, including 73 sites that were identified or revisited during the 2019-2020 field investigations and two previously recorded sites (31GH35 and 31GH45) that could not be revisited due to lack of access. Also discussed are 10 previously recorded sites that did not require additional survey as they had been delineated within the current Area of Potential Effects (APE) during past episodes of fieldwork. The two other sites, 31GH700 and 31GH709, are road traces that are documented in an appendix to the management summary. Both are located outside of the project alternatives and were therefore not assessed for National Register of Historic Places (NRHP) eligibility but were investigated to better understand former travelways in the Stecoah Gap and Fort Hill areas.

Of the 73 sites identified or revisited during the 2019-2020 archaeological investigations, 54 sites (31GH75, 31GH237, 31GH484-485, 31GH598, 31GH654-31GH660, 31GH663, 31GH665-31GH672, 31GH674-676, 31GH680-690, 31GH692-695, 31GH701-702, 31GH711-714, 31GH717, 31GH719-722, 31GH724-726, and 31GH730) were recommended not eligible for listing in the NRHP, or at least the portions of the sites within the surveyed corridor would not contribute to any potential eligibility of the sites. We concur with these recommendations.

We do request that the language in the report be consistent throughout for those sites that may extend outside of the surveyed corridor (e.g., 31GH237, 31GH484, 31GH654, 31GH658, 31GH684, 31GH695, 31GH711, 31GH717, 31GH730), and therefore, the overall sites should remain unassessed while the investigated portion is being recommended not eligible for listing in the NRHP. For one site in particular, 31GH608, that was not revisited during the 2019-2020 fieldwork, the language in the

report should more clearly address whether the site has been fully delineated or if it may extend outside surveyed corridor and should therefore remain unassessed.

Eleven of the remaining 19 sites that were identified or revisited during the 2019-2020 field investigations were recommended eligible for listing in the NRHP, including 31GH34, 31GH46, 31GH599, 31GH664, 31GH673, 31GH691, 31GH696, 31GH705, 31GH716, 31GH78, and 31GH94, while three sites (31GH625, 31GH723, and 31GH729) are recommended as unassessed for listing in the NRHP and should be further investigated should project activities be determined to impact these sites. We concur with these recommendations.

Finally, five sites (31GH703, 31GH704, 31GH715, 31GH718, 31GH731) are located on Eastern Band of Cherokee Indians (EBCI) Tribal Trust Lands and the recommendations concerning these sites were not reviewed by our office. We fully understand that it is up to the EBCI Tribal Historic Preservation Officer (THPO) to concur or not with your determination of eligibility. However, we would, as a means of maintaining a complete record of all of the sites identified as part of the undertaking, appreciate receiving a copy of the report for those sites and of the EBCI's decision on their eligibility.

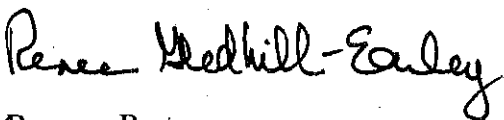
The report does note that the two cemeteries (31GH665 and 31GH705) are located within the project APE and that cemeteries are protected by various state legislation. We anticipate discussions with the NCDOT on how these cemeteries will preferably be avoided, or if necessary, relocated.


We look forward to receiving the full survey and evaluation report.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your continued cooperation and consideration. If you have questions concerning the above comments, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above-referenced tracking number.

Sincerely,



 Ramona Bartos

cc: Matthew Wilkerson, NCDOT
Paul Webb, TRC
Russell Townsend, EBCI
Elizabeth Toombs, Cherokee Nation
Whitney Warrior, UKB
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NCDOT STIP No. A-0009C
Environmental Advocacy Group Meeting
07.01.2020, 10:00am

Attendees

Brian Burch (Division 14)	Hugh Irwin (Wilderness Society)
Aaron Williams (FHWA)	Stacy Oberhausen (TGS)
Marla Chambers (WRC)	Jimmy Terry (TGS)
Melanie Mayes (WaysSouth)	Amy Sackaroff (Stantec)
David Bacon (WaysSouth)	Emily Love (Stantec)
Axel Ringe (WaysSouth)	Alexa Kennedy (Stantec)

Purpose: To update the Environmental Advocacy stakeholder group on project alternatives and mitigation measures at the Appalachian Trail.

Project Update: Stantec provided an update of the project and current detailed study alternatives. Concurrence Point 2 was revisited on May 20, 2020. At this meeting, the tunnel design options (S-2 and SW-1A) were dropped from further study due to impacts and cost. Alternative 1 (Improve Existing US 129 / NC 143 / NC 28) is the single build alternative at this time. The Environmental Assessment will examine Alternative 1 and the No Build alternative.

Retaining Walls: Stantec provided an overview of the proposed retaining wall treatment options. Geocell walls will not be pursued due to design issues connecting to the existing topography. A modified tiered retaining wall concept was presented to the group, which would minimize visual effects. The tiered retaining walls are approximately 1,400 feet long and include three-foot high walls and three-foot wide benches, with an average height of 33 feet and maximum of 63 feet. The modified tiered retaining walls would impact 0.73 acres more of United States Forest Service (USFS) land than the original retaining wall design. Should this retaining wall treatment move forward, the project team would coordinate with USFS on a potential planting plan for the walls.

- FHWA inquired if the 0.73 acres included ROW from the Appalachian Trail's historic boundary as shown in the PPT presentation.
 - Stantec confirmed the 0.73 acres includes additional ROW from the AT and USFS land.
 - *Post meeting clarification: For comparison, the traditional retaining wall design includes 0.34 acres of impacts to USFS land.*
- Wilderness Society inquired if the parking area at the AT shown in the rendering was at the same location as the existing parking area.
 - Stantec confirmed the parking lot is in same location.
- Wilderness Society noted concerns that should an animal cross a widened NC 143, retaining walls may potentially be a barrier, and encourage wildlife to travel parallel to the retaining wall as opposed to over the retaining wall. Wilderness Society also noted some animals, such as bears, avoid wide highway crossings.

- WaysSouth concurred, noting a larger, fast moving animal may be able to cross here, but the retaining walls could serve as an impermeable structure for smaller animals.
- Wildlife Resources Commission (WRC) inquired if there would be measures added to help wildlife get across or to avoid collisions. WRC suggested the use of warning systems to alert drivers of animals in the road ahead as utilized in western US. WRC inquired if there would be a ramp for smaller animals to use to lead them to natural habitat.
 - Stantec noted the proposed design includes a wide shoulder to maintain the line of sight.
 - Stantec stated the design could potentially be modified to incorporate breaks in the retaining wall and place jersey barrier for smaller animals to cross, but would be dependent on the topography.
- WaysSouth encouraged the team to reach out to additional wildlife crossing subject matter experts with WRC, such as Travis Wilson and Justin McVey.
 - WRC noted both Travis and Justin, and Colleen Olfenbuttel were engaged in the project.
 - Stantec noted that if this were pursued, it would be developed in consultation with WRC.
- Wilderness Society noted there is a USFS road adjacent to the parking area and inquired whether wildlife could be directed along the road with landscaping. Wilderness Society noted the natural movement for wildlife currently is toward the USFS road.

Pedestrian Bridge: A pedestrian bridge is being evaluated as potential mitigation at the AT. This would require the relocation of a short section of the AT, which would connect to the pedestrian bridge.

- WaysSouth noted concerns that the pedestrian bridge may become icy and unsafe to cross in the winter season.
- WaysSouth noted NC 143 does not provide sufficient sight distance for hikers on the AT crossing the road.

Land Bridge: Stantec provided a synopsis of the proposed land bridge concept. The proposed land bridge concept includes an arched, bottomless culvert for wildlife and humans to cross over NC 143. The land bridge would be approximately 160-feet long, 311-feet wide, and 29-feet tall filled with earth materials and planted. It would cost approximately \$5 million. The project team has consulted with the Wildlands Network who provided recommendations on a wildlife crossing, including the recommendation for a minimum width of 165 feet and providing a line of sight for wildlife. Roadway geometry, safety aspects, geotechnical, and structural feasibility would be evaluated from a design standpoint. Any fencing around the land bridge would be designed to minimize visual impacts. The land bridge would only be visible from AT Viewpoints (VP) 2 and 3.

- Stantec noted noise from the road could affect the crossing being utilized by wildlife.
- WaysSouth stated there would be a temporal difference between human and wildlife utilization of the land bridge as humans would use the crossing during the day, whereas wildlife typically cross during the night.
- Wilderness Society noted fencing below the AT to separate the trail path from the highway is preferable. There is concern over animals being directed down to the highway if they were to come between the fence and highway.
- FHWA inquired about the height of the fencing.

- Stantec noted they were between five and eight feet high.
- Wilderness Society inquired if it was possible for landscaping on both sides where the AT approaches the land bridge and to extend the retaining wall to serve as a barrier for animals and negate the need for fencing in the area.
 - TGS noted the AT stakeholder group may view a higher wall as an adverse effect if visible by hikers along the AT.
- Stantec noted NCDOT would maintain the structure.
- Stantec noted it is not anticipated for the proposed land bridge to set a precedent for other projects due to the unique context of the project.
 - Wilderness Society agrees that it is a unique situation. A lot of existing infrastructure was not building with animal crossings in mind and this issue is starting to get more attention.
- Waysouth inquired about a double-arched tunnel and offered to provide the team with designs.
 - TGS noted that the footprint would have to increase to allow for a center median, which would further impact USFS land.
 - Waysouth noted it could be grade separated and wouldn't require a median.
- Waysouth inquired about funding for a potential land bridge.
 - TGS noted there is not enough funding to build a tunnel, which is one reason for elimination of S-2 and SW-1A from further study at the May 20, 2020 CP2 revisit meeting. However, there is funding to build a land bridge.
 - Waysouth clarified the double-arched idea is cut and cover, like with a culvert. It would only need to be ~150 ft long and may be cheaper than \$5 million.
- FHWA inquired how crash history informed the decision to provide a land bridge for wildlife crossing.
 - Wilderness Society noted a lack of methodology for recording animal-vehicle collisions, including roadkill harvesting.
 - FHWA noted that they were curious about the location of the fencing and if it would have visual impacts from the hiker's perspective.
- Waysouth noted that the land bridge would be a good compromise to accomplish the transportation needs while maintaining wildlife connectivity.
- Wilderness Society is in favor of the land bridge concept.
- WRC noted that Terry McGuire could be helpful to reach out to. WRC is encouraged by Waysouth's comment about human and animal joint use, but that issue is still something that needs to be considered, as not all of the animals in the area are nocturnal.

Action Items/Next Steps:

- Core Team to hold meeting with AT stakeholder group July 1st to discuss retaining wall treatments and the potential land bridge.
- Core Team to provide the environmental advocacy stakeholder group with meeting minutes with the July 1st AT stakeholders meeting minutes upon acceptance.

NCDOT STIP No. A-0009C
AT Stakeholders Meeting
07.01.2020, 2:00pm

Attendees

Brian Burch (Division 14)	Denise Nelson (NPS)
Jamie Lancaster (NCDOT Cultural Resources)	Morgan Sommerville (ATC)
Mary Pope Furr (NCDOT Cultural Resources)	Stacy Oberhausen (TGS)
David Hinnant (NCDOT Visualizations)	Jimmy Terry (TGS)
Aaron Williams (FHWA)	Amy Sackaroff (Stantec)
Renee Gledhill-Early (NCSHPO)	Steve Smallwood (Stantec)
Erik Crews (USFS)	Michael Wray (Stantec)
Joel Hardison (USFS)	Emily Love (Stantec)
Jonathan Lampley (USFS)	Thomas Hoppe (Stantec)
Sheryl Bryan (USFS)	Alexa Kennedy (Stantec)

Purpose: To present potential mitigation measures at the Appalachian Trail and gain feedback from the AT Stakeholders.

Project Alternatives: Stantec provided an update of the project and current detailed study alternatives. Concurrence Point 2 was revisited on May 20, 2020. At this meeting, the tunnel design options (S-2 and SW-1A) were dropped from further study due to impacts and cost. Alternative 1 (Improve Existing US 129 / NC 143 / NC 28) is the only build alternative. The Environmental Assessment will examine Alternative 1 and the No Build alternative.

Retaining Walls: Stantec provided an overview of the proposed retaining wall treatment options. Geocell walls will not be pursued due to design issues connecting to the existing topography. A modified tiered retaining wall concept was presented to the group, which would minimize visual effects. The tiered retaining walls are approximately 1,400 feet long and include three-foot high walls and three-foot wide benches, with an average height of 33 feet and maximum of 63 feet. The modified tiered retaining walls would impact an additional 0.73 acre of United States Forest Service (USFS) land than the original retaining wall design. Should this retaining wall treatment move forward, the project team would coordinate with USFS on a potential planting plan for the walls.

- USFS noted previous retaining wall renderings included a stacked precast retaining wall with planting, and the current renderings were a vast improvement.
- USFS inquired about the depth of the planting area and the size of vegetation that could be accommodated.
 - Stantec noted the walls would be poured in place concrete with formliners. The three-foot benches would allow for shrubs and understory plants.
 - USFS noted that appropriate plants should be considered so they do not draw wildlife down to the roadway. USFS offered to provide a list of appropriate plants.

- North Carolina State Historic Preservation Office (NCSHPO) inquired if it was realistic to have trees that large on the slope as presented in the rendering.
 - Stantec noted there would be temporary construction impacts and successional growth.
 - USFS noted there are fairly large trees on those slopes already. If the slopes are disturbed, it would take years before the trees regrew to the same size.
 - ***See attached memorandum with responses to questions raised during the meeting.***

Pedestrian Bridge: Stantec reviewed the renderings of the proposed pedestrian bridge concept. This concept would require the relocation of a short section of the AT as recommended and coordinated with ATC and USFS, which would connect to the pedestrian bridge.

- USFS inquired if the pedestrian was a metal structure, and if the style was representative of others along the AT.
 - Stantec confirmed it is a metal bridge and noted this design was used on other pedestrian overpasses.
 - Appalachian Trail Conservancy (ATC) noted that there are similar AT bridge crossings.

Example pedestrian bridge along the AT at the James River



Source: Google Map images



Source: Google Map

- USFS inquired if the bridge would be painted.
 - Stantec stated it would be painted to provide an aesthetic treatment that would blend with the surrounding environment.

Land Bridge: Stantec provided a synopsis of the proposed land bridge concept. The proposed land bridge concept includes an arched, bottomless culvert for wildlife and humans to cross over NC 143. The land bridge would be approximately 160-feet long, 311-feet wide, and 29-feet tall filled with earth materials and planted. It would be maintained by NCDOT and cost approximately \$5 million. The project team consulted with the Wildlands Network for recommendations on a wildlife crossing, including the recommendation for a minimum width of 165 feet and a line of sight for wildlife. Roadway geometry, safety aspects, geotechnical, and structural feasibility would be evaluated from a design standpoint. Any fencing around the land bridge would be designed to minimize visual impacts. The land bridge would only be visible from AT Viewpoint (VP) 2. Due to the unique context of the project, the team does not anticipate setting a precedent for future projects.

- NCSHPO inquired if it would be possible to maintain traffic during construction of the land bridge, and whether this could be done without incurring additional impacts to UFS land.
 - Stantec noted it would be a challenge and additional coordination with Division 14 was required.
- USFS inquired whether mitigation for short-term impacts to AT hikers during construction was being considered.
 - Stantec noted construction details had not been determined at this point.
- National Park Service (NPS) noted the land bridge provided benefits for both the AT hikers and wildlife. NPS requested additional information on the impacts of relocating the AT, including visual effects on the approach to the land bridge.
 - USFS agreed with NPS.
 - USFS noted the land bridge would allow hikers to cross the AT on a naturalized setting and requested the project team further investigate the best location for the AT. The USFS suggested relocating the AT to the west side of the ridge might further reduce visual impacts.
- USFS inquired how access to the top of the land bridge would be provided to place the fill material, and whether dump trucks would be able to drive on top.
 - ***See attached memorandum with responses to questions raised during the meeting.***
- USFS noted the retaining wall is visible behind the land bridge and inquired whether it would be possible to slope the retaining wall to stop at the top of the land bridge.
 - Stantec noted they have received preliminary geotechnical feedback that indicated sloping down the land might be viable. There is also potential for earthwork in a rough form that would facilitate the connection better.
 - ***See attached memorandum with responses to questions raised during the meeting.***
- USFS inquired if it was necessary to continue the fencing along the bridge itself, or if the fence could lead to the wing walls and terminate.
 - Stantec noted further research and coordination was needed to confirm, but most examples show fencing on the structure, however fencing could be placed in between vegetation on the land bridge.
 - ***See attached memorandum with responses to questions raised during the meeting.***

- FHWA noted the Environmental Advocacy stakeholder group recommended moving the fencing closer to the bottom of the slope. FHWA asked the stakeholders for their perspective on how this would impact things from a visual standpoint.
 - ATC noted from a visual effects standpoint, it would be preferable to have the fence located below the AT.
 - USFS noted that Justin McVey and Jeff Hunter may be useful resources.
 - ATC noted a privately owned parcel adjacent to the AT and proposed land bridge they would like to acquire.
 - USFS noted another option would be to put the fencing even closer to the road, which would create fewer visual impacts.
 - Noted a concern over smaller animals getting trapped within the fencing.
- ATC requested additional information on the optimal location for the AT relocation and whether it could be relocated adjacent to the current USFS road.
 - USFS suggested moving the AT to the Robbinsville side of the Gap would eliminate VP2 and VP3 and therefore remove visual effects of the land bridge.
 - ATC noted they would still want access to the trailhead, but how best to get there is negotiable.
 - *Post Meeting Response: The Core Team will continue to work with ATC, USFS and NPS to identify an appropriate path for the Appalachian Trail. **See attached memorandum with responses to questions raised during the meeting.***
- ATC noted a tiered structure is fine from their perspective.
- ATC requested information on where the AT would be on the land bridge.

Action Items/Next Steps:

- USFS to provide list of appropriate plants for the tiered retaining wall.
- Stantec to coordinate as needed to develop responses to questions raised during meeting (*completed; see attached memorandum*)

ACS/ECL

NCDOT STIP No. A-0009C
AT Stakeholders Meeting
07.30.2020, 1:00pm

Attendees

Wanda Austin (Division 14)	Stephen Yerka (EBCI)
Josh Deyton (Division 14)	Denise Nelson (NPS)
Garret Higdon (Division 14)	Morgan Sommerville (ATC)
Jamie Lancaster (NCDOT Cultural Resources)	Donna Dancausse (Facilitator)
Mary Pope Furr (NCDOT Cultural Resources)	Stacy Oberhausen (TGS)
David Hinnant (NCDOT Visualizations)	Jimmy Terry (TGS)
Aaron Williams (FHWA)	Amy Sackaroff (Stantec)
Renee Gledhill-Early (NCSHPO)	Steve Smallwood (Stantec)
Erik Crews (USFS)	Michael Wray (Stantec)
Jonathan Lampley (USFS)	Emily Love (Stantec)
Elizabeth Toombs (Cherokee Nation)	Thomas Hoppe (Stantec)

Purpose: To review the Appalachian Trail (AT) conceptual realignment and revisit Section 106 Effects for the AT.

Land Bridge Conceptual Renderings: Stantec reviewed the updated land bridge conceptual renderings.

- Stantec noted in the revised renderings, fencing had been moved closer to NC 143 to provide for NCDOT maintenance.
- Stantec noted the fencing was roughly eight-feet high, confirmed with wildlife experts, which spans the top of the land bridge.
- Stantec noted additional vegetation was added in the renderings to provide for future successional growth.
- NC State Historic Preservation Office (NCSHPO) inquired if there was a rendering of the land bridge from the west side of NC 143.
 - Stantec answered no, all views were from the eastern side of the AT.
 - US Forest Service (USFS) stated their perception was the views from the AT crossing the land bridge would be similar to views shown from Viewpoint (VP) 1. USFS stated drivers would see the inverse of the eastern view renderings.
 - Appalachian Trail Conservancy (ATC) concurred, noting in leaf off season the land bridge may be visible from the switchback of NC 143, however the view of the land bridge would be obscured from the AT.
- Stantec reviewed renderings from the center of the land bridge, noting views would be similar facing both east and west from the center of the land bridge.

AT Conceptual Realignment: Stantec provided an overview of the AT conceptual realignment, noting a 50-foot corridor was shown to provide for field truthing of the final alignment. Stantec confirmed the earth material could be transitioned into the slope of the land bridge.

- Stantec stated the realigned AT and land bridge would eliminate visual impacts from VP 2 and VP 3.
- Stantec noted the structure length had been reduced due to impacts to the Grace Tabernacle property driveway.
- Stantec noted NCDOT would assist with new signage.
- Stantec stated while a question was received at the July 1st meeting regarding surface water on the Grace Tabernacle property, GIS and survey files do not indicate a presence.
- ATC requested a copy of the slideshow.
- USFS noted concerns over the realigned AT south of NC 143, particularly the red dotted line “spur” section of the Trail, and stated hikers would likely create a new path from the picnic area to the land bridge, in order to cross NC 143 heading north. USFS requested the team explore a direct connection directly west of the parking lot.
 - ATC noted the connection would be a side trail and not part of the designated AT, connecting to the AT on the land bridge to the parking lot. It would not be considered as part of the AT and it would be acceptable to include steps, if needed. The views from the side trail are not of concern.
 - National Park Service (NPS) concurred.
 - Stantec identified a location for the side trail during the meeting and all parties concurred. The red dotted line spur trail is eliminated.
- USFS requested the land bridge width be maximized while maintaining driveway access to Grace Tabernacle property, noting the wider the bridge, the less visual impacts to users of the AT, potentially extending the bridge 40-50 feet.
 - Division 14 stated the land bridge could be extended if the extension did not impact sight distance for NC 143, which will be reviewed during final design.
- NCSHPO asked how the trail would be maintained during construction.
 - Division 14 noted the land bridge would be constructed through phased construction, while maintaining the current AT and building the land bridge. Then the AT would be relocated to the land bridge while the old trail is removed. Division 14 stated temporary nighttime road closures was a possibility, which would expedite construction of the land bridge.
 - ATC noted agreement.
- Eastern Band of Cherokee Indians (EBCI) Tribal Historic Preservation Office (THPO) inquired whether the AT realignment corridor extended past the archaeological Area of Potential Effects (APE) into the EBCI tribal land holding on NC 143.
 - Stantec stated the corridor did not intersect tribal land holding, and noted the EBCI property was further north on NC 143.
- EBCI also speculated, that if the AT realignment corridor extends beyond the archaeological APE, additional archaeological surveys may be needed.
 - Stantec to coordinate with TRC to confirm whether the AT realignment corridor extends outside the archaeological APE.
 - TGS noted any archaeology surveys would be completed by November.

AT Section 106 Effects Revisit: NCDOT Cultural Resources clarified the Section 106 Effects revisit was for the AT, and noted NCSHPO's suggestion of a Programmatic Agreement (PA) would allow the group to resolve Section 106 for the AT, and periodically check in.

- NCSHPO provided an overview of PA's, noting PA's were used when there would likely be changes in the project and there is a potential for effects that cannot guarantee avoidance.
- Division 14 clarified the project would be I design-bid-build, not design build, which is anticipated to be corrected in the revised publication of the State Transportation Improvement Program (STIP).
- FHWA noted that Section 4(f) could not be resolved until Section 106 was complete.
- Facilitator inquired whether NCSHPO would be making a Section 106 call.
 - NCSHPO stated a meeting with the Advisory Council for Historic Preservation (ACHP) would need to be held first with NCDOT, FHWA, and USFS.
 - EBCI THPO requested they be invited to the meeting as well.
- NCSHPO noted the PA would take into account all historic resources for the project, not just the AT.
 - EBCI THPO noted concern over archaeological sites impacted by the project.
 - Division 14/Stantec stated archaeological surveys are still underway at the AT and the survey area will be adjusted to capture the relocated trail.
- ATC inquired whether the acquisition of the Grace Tabernacle property tied into the Section 106 decision, noting concerns on whether the AT realignment was feasible.
 - Division 14 stated conceptual plans would be prepared by the end of 2020, and the property would be acquired through NCDOT's right of way process for the portion necessary for the relocation. Access to the land now will be available through NCDOT's Location & Surveys unit.
 - ATC stated fieldwork would include flag-lining the potential realignment.
- NCSHPO noted the ACHP PA slide did not apply to the current process.
- Stantec stated access to the AT corridor following resolution of the Supreme Court *USFS v. Cowpasture River Preservation Association* case had not been granted for cultural resource surveys.
 - USFS to provide update to the group following the meeting.
- FHWA informed the NPS and USFS that if a Section 106 No Adverse Effect and Section 4(f) *de minimis* determination was reached for the AT, FHWA would request written concurrence from both agencies.

Action Items/Next Steps:

- Stantec to provide ATC with a copy of the PowerPoint presentation. *Complete, sent 7/31/20*
- Stantec to revise AT realignment south of NC 143 to provide a direct connection between the parking lot and land bridge.
- Stantec to maximize land bridge length to greatest extent while maintaining driveway access to the Grace Tabernacle property and sight distance.
- Stantec to coordinate with TRC to confirm whether the AT realignment corridor extends outside the archaeological APE.
- FHWA and NCSHPO to schedule a meeting with ACHP, NCSHPO, NCDOT, FHWA, USFS, and tribes to discuss the project PA.

- USFS to provide update on cultural resource survey access to the AT corridor.
- NCDOT provide access to Grace Tabernacle property. *Complete, email sent 7/31/20*

NCDOT STIP #A-0009C

Section 106 Programmatic Agreement Discussion with the ACHP

August 10, 2020

Meeting Minutes

Attendees:

FHWA: Aaron Williams, Clarence Coleman, David Clarke, Donna Dancausse

ACHP: Mandy Ranslow, FHWA Liaison

NCDOT: Wanda Austin, Dave McHenry, Jamie Lancaster, Mary Pope Furr, Matt Wilkerson

NCSHPO: Renee Gledhill-Earley

Tribal Nations: Elizabeth Toombs, Cherokee Nation THPO; Stephen Yerka, EBCI THPO

Meeting Purpose: To lay out how a Programmatic Agreement (PA) would look for the A-0009C project.

Meeting Outcome: The participants agreed to move forward declaring a No Adverse Effect (NAE) at the Appalachian Trail with a commitment to enter a PA that outlines procedures, roles & responsibilities, and continued consultation through the project. The intent of the PA is to get a NAE call for the entire project for both historic and archaeology sites. In the event that an archaeological site eligible for the NRHP has a finding of adverse effect, the PA will spell out a process where a Memorandum of Agreement (MOA) would be developed. An adverse effect for archeology cannot be covered within the PA itself. This information will be recorded in the project EA.

Discussion Highlights:

Section 106 Project Background and Why a PA is Proposed: Aaron and Renee summarized the project relative to Section 106 fulfillment and explained why a PA is proposed. There was a Section 106 Effects meeting on June 1, 2020 where effects calls were determined for 20 buildings, 2 historic districts and the Appalachian Trail (AT). At the time, there were 2 designs for the AT, both involving a pedestrian bridge: a 2-lane design received a No Adverse Effect call; a 4-lane design received an Adverse Effect call. NCDOT continued to explore design options, including how to accommodate animal passage as suggested during coordination with various environmental advocates. The current design at the AT involves 4 lanes and a land bridge which will carry the AT over the road.

The PA is proposed, not just because of the AT, but also in consideration of the other Sec 106 resources such as buildings and over 60 archaeological sites. The project involves improving the existing roadway in a mountainous region and is challenging. There are unknowns and the potential for creating more unknowns. It involves relocation of the AT and introduces more pavement into the landscape. Design is not far enough along to inform every potential impact. There are archaeological sites that have not yet been surveyed, some due to access denied by property owners. Situations such as the need for more detour space; expanding construction area; and possible rockslides/landslides dictate that the project team develop a way to address those circumstances so the project doesn't slow down.

The PA identifies conditions and commitments and codifies that we reach a no adverse effect (NAE) and that we keep a NAE through the project's final design, ROW and construction.

The Scope of the PA, Likely Content, Format:

While there may be focus on the AT, the PA would cover the entire project. The effects determinations made on June 1 are property by property for historic architecture and landscapes only. The PA documents and memorialize the previously agreed upon calls and conditions from the June 1st meeting

and a NAE call for the *project*. It will spell out environmental commitments for the AT and other sites that allow signatory parties to commit to and concur that there is not an adverse effect for the project.

Mandy explained the following aspects of the PA could include:

- future steps such as periodic design reviews and consultation points to ensure the NAE still applies
- describes how any additional properties may be assessed, avoidance and mitigation measures, and the course of action to follow should findings challenge the NAE call. This aspect will be especially important for the archaeological sites
- may spell out specifications or aspects of the roadway alignment
- describes consulting parties, which would include those already identified for the project
- signatory parties with land ownership, such as the EBCI and the USFS

The PA needs to be executed prior to the FONSI. The FONSI is scheduled for December 2020. Some EA's have a draft PA. We could consider including an outline of the PA, since this type of agreement may be unfamiliar to the public. Discussion followed:

- A draft PA in the EA is not feasible; however, FHWA committed to including language discussed by the project team in the EA about the PA
- ACHP offers a template to follow. The template can be changed to reflect project specific information.

Archaeology:

David Clarke inquired about the status of archaeology and explained that to have a PA with a NAE, there must be avoidance for any archaeological sites that are eligible for the NRHP and warrant preservation in place. It is important to gage the possibility of an impact that would require preservation in place, meaning avoidance of the site is not possible. This is especially important for fulfillment of 4(f) regulations.

Wanda and Matt explained that archaeological work is complete for all sites that property owners allowed NCDOT to access. NCDOT has made and will continue to make a good faith effort to gain access for all sites. Some property owners denied access. In addition, there are some properties along the AT that NCDOT couldn't access because of the *Cowpasture* legal case. NCDOT and USFS are coordinating on access now that the case is resolved.

The consulting parties are currently reviewing the archaeological management survey (comments due August 14). For this project, it was agreed to use the management summary to determine eligibility. The summary addresses 88 sites, many of which are revisits of the survey done for the project in 2012. After the comments are assessed for eligibility, the effects calls will be made.

There is one site currently at the toe of a fill. The construction would simply put more fill on it. Through discussion, and in consideration other projects with similar sites, the consensus is that further covering the site, not disturbing it, and geo-referencing it, is avoidance and would likely warrant a no adverse effect. The Trail of Tears is acknowledged as an important site, but current indications are that it will be avoided

Overall there are a small number of sites that pose unknowns, primarily those where property owners denied access for survey. Stephen Yerka added that not having the final report for Phase 1 and further

Phase 2 studies, pending decisions on boundary modifications associated with the relocation of the AT, may introduce some risk. We would have to avoid anything found or be confident that it would be “buried”.

Mandy advised that the PA can cover what is to be done to finalize Phases 1 & 2 and what to do if any future site can't be avoided. She suggested that executing an MOA that captures data recovery would be the best course for such contingencies.

Moving Forward:

- Start work towards having a finalized PA in December. Consult the ACHP template. NCDOT Cultural Resources to draft for FHWA (NC Division and David Clarke) review
- FHWA to extend an invitation to the ACHP to be involved in coordination and development of the PA
- FHWA discuss the PA with USFS and identify their timeline for obtaining signatures
- NCDOT and FHWA determine the language to add to the EA about the PA, including language to address archaeology
- NCDOT, FHWA, and the Tribes continue coordination on archaeology, including with the EBCI for any sites on its tribal lands; identify and communicate any findings to assess implications for the PA.

Federal Aid #: APD-0074(178)

TIP#: A-0009C

County: Graham

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: Appalachian Highway Development System: Corridor K Improvements from Robbinsville to Stecoah

On June 1 and July 30, 2020 representatives of the

- North Carolina Department of Transportation (NCDOT)
- Federal Highway Administration (FHWA)
- North Carolina State Historic Preservation Office (HPO)
- Other: USACE, USFS, Elizabeth Toombs (Cherokee Nation), Stephen Yerka (EBCI), NPS, AT Conservancy

Reviewed the subject project and agreed on the effects findings listed within the table attached to this signature page.

Signed:

DocuSigned by: <i>Mary Pope Furr</i>	8/19/2020
ED3110443890489... Representative, NCDOT	Date
DocuSigned by: <i>Charles W. Adams, Jr.</i>	8/19/2020
E932DEEC5B6240F... FHWA, for the Division Administrator, or other Federal Agency	Date
DocuSigned by: <i>Renee Gedhill-Earley</i>	8/19/2020
C26A1556A275464... Representative, HPO	Date

Federal Aid #: APD-0074(178)

TIP#: A-0009C

County: Graham

Property and Status	Alternative	Effect Finding	Reasons
John and Mattie Colvard House (GH0238) – DE Criterion C	Improve existing	No adverse effect <i>De minimis</i> 4(f)	3-lane section with guardrail along US 129 could require tree removal within historic boundary. NCDOT will survey trees and minimize design to decrease impacts and removed trees will be replaced with balled/burlaped trees guaranteed to survive 3 years
Frank and Lenora Colvard House (GH0235) – DE Criterion C	Improve existing	Outside revised APE	Original project APE reduced after surveys due to elimination of several proposed alignments.
Colvard Motor Company (GH0236) – DE Criteria A&C	Improve existing	Outside revised APE	Original project APE reduced after surveys due to elimination of several proposed alignments.
Colvard House (GH0240) – DE Criterion C	Improve existing	Outside revised APE	Original project APE reduced after surveys due to elimination of several proposed alignments.
J. Boyd Crisp House (GH0242) – DE Criterion C	Improve existing	Outside revised APE	Original project APE reduced after surveys due to elimination of several proposed alignments.
The Hut (GH0204) – DE Criteria A&C	Improve existing	No effect	No construction activities within historic property boundary and will not impact setting or viewshed
Robbinsville First Baptist Church (GH0203) – DE Criterion C	Improve existing	No effect	Intersection improvements at US 129 and East Main Street will not require construction activities within historic property boundary and will not impact setting or viewshed
Robbinsville Downtown Historic District (GH0230) – DE Criteria A&C	Improve existing	No effect	No construction activities within historic property boundary and will not impact setting or viewshed

Old Mother Church and Cemetery (GH0048) – DE Criterion A	Improve existing	No effect	No construction activities within historic property boundary and will not impact setting or viewshed
Delmas and Mary Ruth Shuler House (GH0257) – DE Criterion C	Improve existing	No effect	No construction activities within historic property boundary and will not impact setting or viewshed
Patton Gwynn Denton House (GH0264) – DE Criterion C	Improve existing	No effect <i>De minimis</i> 4(f)	Permanent drainage and utility easements within historic property boundary but will not impact setting or characteristics that contribute to the significance of the site. No change in access.
Cody House (GH0263) – DE Criterion C	Improve existing	No adverse effect <i>De minimis</i> 4(f)	Permanent utility easements for utility pole service line within historic property boundary but will not impact setting or characteristics that contribute to the significance of the site.
John and Ruby Cody House (GH0261) – DE Criterion C	Improve existing	No adverse effect with environmental commitments	No construction activities within historic boundary. Stone walls that line the driveway will be marked with temporary protective fencing during construction to prevent accidental harm.
John A. Cody House (GH0043) – DE Criterion C	Improve existing	No adverse effect <i>De minimis</i> 4(f)	Retaining walls at each end of the historic boundary along NC 143 but will not require ROW or easements. Small permanent utility easement for utility transmission line at NE corner of property but will not impact setting or characteristics that contribute to the significance of the site.
Cheoah Historic District (GH0347) – DE Criterion A includes Sweetwater Baptist Church, Floyd Crisp House, Shope House, Molt Rice House Barn, Earnest Phillips Road, & Beech Creek Road	Improve existing	No adverse effect with environmental commitments <i>De minimis</i> 4(f)	Symmetrical widening of NC 143 within existing ROW but will require temporary on-site detour to replace culvert at Beech Creek (at western end of district). Staged construction methods will be investigated to minimize footprint of detour. NCDOT agrees to tie in detour to existing road prior to the driveway at the Shope House, minimize tree cutting and/or removal along detour, and restore landscape to pre-construction appearance after completion.
Randolph-Stewart House (GH0272) – DE Criterion C	Improve existing	No adverse effect <i>De minimis</i> 4(f)	Retaining wall with a height between 3’-6’ along eastern boundary with NC 143 within existing ROW and visible from barn. Permanent utility easement and construction easement within western boundary of property but will not impact setting or characteristics that contribute to the significance of the site.

Appalachian National Scenic Trail (NC0007) – DE Criteria A,B,&C	Improve existing 4-lane cross section with pedestrian bridge	Adverse effect	Climbing lanes in both directions result in 4-lane section with guardrail and retaining walls on both sides of road at AT crossing of NC 143 [1600’ retaining wall at the crest of Stecoah Gap with a maximum height of 30’, average height of 12’, height of 6’ at trail, and a wall on east side of NC 143 150’ long with average height of 3’]. ROW impacts to USFS land 2.33 acres and .20 acres impacted at trail. AT will be relocated onto a new structure over NC 143. Visual impacts for visitors to the trail and setting impacts to the historic trail.
	Improve existing 2-lane cross section with pedestrian bridge	No adverse effect <i>De minimis</i> 4(f)	Climbing lanes reduced in length therefore at trail there is a 2-lane section with guardrail and retaining walls on one side of road at AT crossing of NC 143 [2000’ retaining wall at the crest of Stecoah Gap with a maximum height of 30’, average height of 10’, height of 3’ at trail, and only guardrail on east side of NC 143]. ROW impacts to USFS land 1.29 acres and .25 acres impacted at trail. Trail will be relocated onto a new structure over NC 143. Fewer visual impacts to trail visitors and less impact to historic setting. Visualizations and aesthetics to walls and bridge to be reviewed with HPO, NPS, and USFS.
	Improve existing 4-lane cross section with combined pedestrian and wildlife crossing land bridge	No adverse effect <i>De minimis</i> 4(f)	Climbing lanes in both directions result in 4-lane section with guardrail, tiered retaining walls, and fences on both sides of road at AT crossing of NC 143 [1146’ of tiered retaining walls at the crest of Stecoah Gap with a maximum height of 63’ and average height of 33’]. ROW impacts to USFS land 3.27 acres and 0.23 acres impacted at trail. AT will be relocated onto a new structure over NC 143 that includes dense plantings and a wildlife crossing. The proposed land bridge is 220’ wide and 78’ long. Visualizations and aesthetics to walls and bridge to be reviewed with HPO, NPS, and USFS.
Stecoah School (GH0025) – DE Criteria A&C	Improve existing	No effect	No construction activities within historic property boundary and will not impact setting or viewshed
Stecoah Baptist Church (GH0026) – DE Criteria A&C	Improve existing	No effect	No construction activities within historic property boundary and will not impact setting or viewshed
Boxed House (GH0349) – DE Criterion C	Improve existing	No effect	No construction activities within historic property boundary and will not impact setting or viewshed

FHWA Intends to use the HPO's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f):

John and Mattie Colvard House

Patton Gwynn Denton House

Cody House

John A. Cody House

Cheoah Historic District

Randolph-Stewart House

Appalachian National Scenic Trail (2-lane cross section with pedestrian bridge and 4-lane section with combined pedestrian and wildlife crossing land bridge)

A Programmatic Agreement between the Parties will be developed to include the Environmental Commitments agreed upon to avoid adverse effects to the historic properties.

Initialed: NCDOT  FHWA  HPO 