



State Auditor

Dave Boliek

RAPID RESPONSE SPECIAL REPORT

North Carolina

Office of the State Auditor

Rapid Response Division

1-800-730-TIPS

October 16, 2026

Blue Ridge Road Underpass Project

WHY WE CONDUCTED THIS REPORT

The North Carolina Department of Transportation (NCDOT) Blue Ridge Road Underpass Project (BRUP) has experienced several years of delays and a significant increase in cost. The North Carolina Office of the State Auditor (OSA) was tasked with evaluating the progress of this project, which aims to improve traffic around the North Carolina State fairgrounds in Raleigh by allowing vehicles and pedestrians to travel under Hillsborough Street and its adjacent railway line.

OBJECTIVE

To determine the factors contributing to delays and cost increases on the BRUP project.

WHAT WE FOUND

OSA performed a comprehensive review of BRUP financial records, project documentation, policies and procedures, and external open-source information, in addition to conducting interviews with key NCDOT staff, and identified the following concerns:

- Funding of BRUP **rose from \$50.7 million in 2018 to \$71.6 million in 2025**, a 41% increase. The largest single funding action was a \$17 million Automated Funding Request Application, approved by the Federal Highway Administration on March 12, 2025.¹
- The BRUP contract gives NCDOT the power to charge the contractor (Lane Construction Corporation [LCC]) significant daily fees for missed deadlines, but **the agency has not publicly reported whether it has done so**. The contract required completion no later than August 1, 2023.² The Proposed Completion Date in LCC's technical proposal was July 31, 2023, which pursuant to the contract, became the Final Completion Date. Failure to meet these deadlines enables NCDOT to invoke liquidated damages clauses including \$20,000 per calendar day for failure to reach Substantial Completion, plus additional penalties for 23 Intermediate Contract Times (ICTs).³

¹ NCDOT Board of Transportation Agenda Item M, April 3, 2025.

² Contract C204157, Project Special Provisions, Contract Time and Liquidated Damages, p. 1; NCDOT Item C, October 2, 2018.

³ Project Special Provisions, p. 1; Project Special Provisions, pp. 1-5.

WHAT WE FOUND cont.

- NCDOT does not maintain clear, public-facing, BRUP-specific performance controls. BRUP is part of the larger I-440 widening project, under one contract. However, this contract's Funding Differentiation provision splits the funding into two separate Work Breakdown Structures (WBS's): one for I-440 widening and one for BRUP. The provisions also require a "separate Table of Quantities and Schedule of Values" for each project. Even so, NCDOT continues to treat the project as one corridor in its documents and reports, making it more difficult for the public to track BRUP-specific progress.⁴
- Right-of-Entry (ROE) issues delayed BRUP from its inception. NCDOT awarded the combined I-440/BRUP design-build contract in October 2018, with a contract Final Completion date of July 31, 2023. However, securing ROE took longer than planned, delaying the start of construction on the railroad right-of-way. Because of the delay, Blue Ridge Road did not close to traffic until October 2022; by that time, NCDOT had already pushed back the public completion target to fall 2024.
- Poor soil conditions discovered after the start of construction added further delays. Due to railroad ROE issues, LCC was able to conduct only limited geotechnical investigation before the start of BRUP construction. Project designers relied on conservative assumptions, which led to costly changes and significant delays when designers encountered poor soil quality during construction.
- As required by the contract, LCC provides NCDOT with a progress schedule. Under NCDOT Standard Specifications, this schedule is required only once, at the beginning of the project, with updates required only if the completion date is extended or anticipated overrun exceeds 5%. As a result, the schedule is a baseline planning document rather than a live monitoring tool, and it does not show which delays are pushing the completion date back as construction progresses.
- NCDOT does not publicly report BRUP-specific delays in a consistent or timely manner. The agency records non-workable days internally, including interruptions due to weather, and usually reviews these delays closer to project completion.⁵ However, NCDOT does not share delay details with the public in real time.
- Railroad reviews and approvals added delays and costs. CSX Transportation, the railroad operator, requires up to 30 days to review work plan resubmittals, plus up to an additional

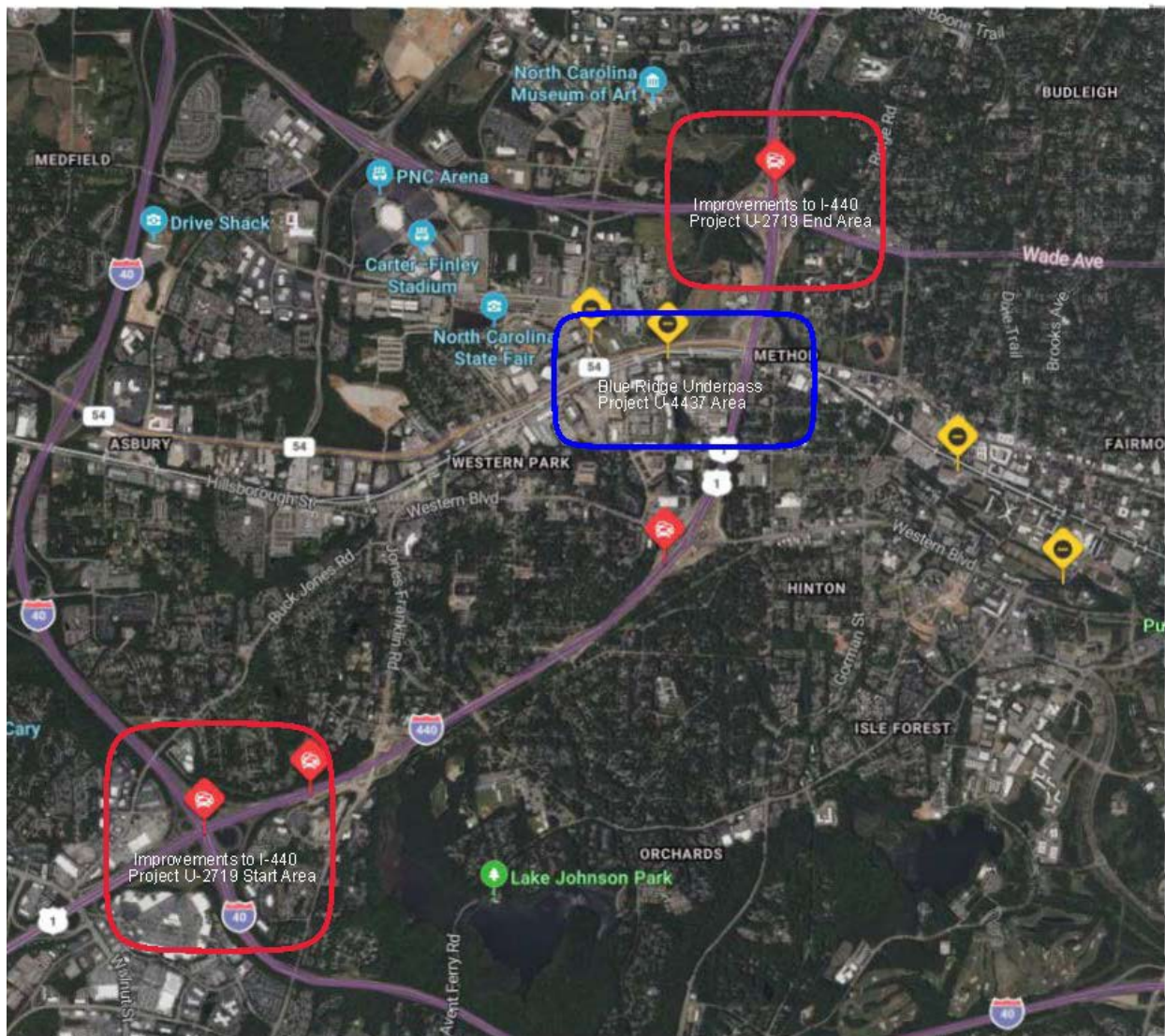
⁴ Project Special Provisions, p. 5.

⁵ Liam W. Shannon email, September 26, 2025.

WHAT WE FOUND cont.

30 days to review any resubmittals returned as not approved.⁶ Work near active tracks can also add significant time. NCDOT stated that railroad review periods and approvals can extend schedules and are outside its direct control.⁷

Figure 1: Aerial overview of the BRUP/I-440 widening project (Bing Maps)



The blue outline shows the approximate working area for NCDOT's BRUP. The red outlines show the approximate working areas for the larger I-440 Project, of which BRUP is a part,

⁶ Local Fund Agreement, CSX Transportation, Inc. (executed August 31, 2021) pg. 16.

⁷ CSX Special Provisions, p. 45.

starting near Walnut Street in Cary, following I-440 past BRUP, and ending approximately north of Wade Avenue in Raleigh.

BACKGROUND

The BRUP project aims to lower the grade of Blue Ridge Road so that it passes under Hillsborough Street (N.C. 54), the Norfolk southern/North Carolina Railroad/CSX corridor, and Beryl Road, and to build new bridges that carry those three crossings over Blue Ridge Road. The goal is to reduce congestion and conflicts between vehicles and trains. A new connector road will link Blue Ridge Road and Hillsborough Street. In 2018, NCDOT combined BRUP with STIP Project U-2719 (I-440 upgrade) and awarded both as a single design-build contract to LCC.

The parties involved in this project are listed below:

- NCDOT Division 5 is the contracting agency.
- LCC is the contractor.
- CSX Transportation, Norfolk Southern Railway, and the North Carolina Railroad Company own and operate rail facilities affected by the project. Each must approve plans, submittals, and construction activities within their respective rights-of-way.
- The City of Raleigh owns utility installations within the project area that will need to be relocated. These include a 30-inch waterline along Hillsborough Street, a water tank and water valve vault on the east side of Blue Ridge Road, and fiber communications.
- AT&T operates a Controlled Environment Vault near the Blue Ridge Road/Beryl Road intersection in the BRUP work area.
- The Federal Highway Administration (FHWA) administers federal funds supporting the project, and approves Automated Funding Request Applications (AFRA) increases.

NCDOT awarded Contract C204157 to LCC on October 23, 2018,⁸ with a price-proposal amount of \$346,200,000. Applying LCC's 25% quality credit (a scoring adjustment that lowers a proposer's price for ranking purposes only, based on the proposal's technical quality), the quality-adjusted award basis was \$259,650,000.⁹ The contract covers both project U-2719 (I-440 widening) and project U-4437 (BRUP). The contract is a single design-build agreement, but splits the funding into two separate elements: 35869.3.1 for U-2719 and 35868.3.4 for U-4437, for which separate Tables of Quantities and Schedules of Values are required.¹⁰

⁸ (NCDOT U-2719 U-4437 C204157 Award Letter, October 23, 2018.

⁹ NCDOT Item C, October 2, 2018.

¹⁰ Project Special Provisions, *Funding Differentiation*, p. 5.

The contract required completion of the projects no later than August 1, 2023. In its Technical proposal, LCC included a Proposed Completion Date of July 31, 2023, which, pursuant to the contract, became the Final Completion date.¹¹ The contract also includes substantial liquidated-damages authority across multiple provisions, as shown in Table 1.

Table 1: BRUP Liquidated Damages Structure¹²

Liquidated Damages Provision	Trigger	Per-Day Amount
Contract Time and Liquidated Damages (PSP p. 1)	Failure to reach Substantial Completion by LCC proposed Substantial Completion Date	\$20,000 per calendar day
Contract Time and Liquidated Damages (PSP p. 1)	After Substantial Completion through Final Completion	\$5,000 per calendar day
Intermediate Contract Time #1 (PSP pp. 1–2)	NC 54 (Hillsborough Street) bridge over Blue Ridge Road not opened by ICT #1 Completion Date	\$5,000 per calendar day (BRUP-specific)
Intermediate Contract Time #1 (PSP pp. 1–2)	ICT #1 not met during NC State Fair window	\$25,000 per calendar day (BRUP-specific)
Other Liquidated Damages and Incentives (PSP pp. 3–5)	ICTs #2–21 (lane, ramp, and road closures; ITS); ICTs #22–23 (Blue Ridge Road State Fair Stop pavement)	Ranges from \$500/hour to \$25,000/day; ICTs #22–23 at \$25,000/day are BRUP-specific

¹¹ Project Special Provisions, Contract Time and Liquidated Damages, p. 1; NCDOT Item C, October 2, 2018.

¹² Contract C204157, Project Special Provisions, Contract Time and Liquidated Damages, p. 1; Intermediate Contract Time Number 1 & Liquidated Damages / Incentive, pp. 1–2; Other Liquidated Damages and Incentives, pp. 3–5.

Together, these provisions give NCDOT the contractual power to charge LCC significant daily fees for missed milestones. Some of these milestones are BRUP-specific, including the opening of N.C. 54 over Blue Ridge Road (ICT #1) and State Fair Stop pavement work (ICTs #22 and #23). ICT #1 provides for damages of \$5,000 per calendar day during normal operation and \$25,000 per calendar day during the North Carolina State Fair. According to NCDOT communications through September 2025, the agency has not publicly reported whether it has invoked any of the liquidated damages clauses against LCC.

The funding history of BRUP is shown in Table 2.

Table 2: BRUP Funding History (August 2018–September 2025)¹³

Funding Action	Date	Net Change	Cumulative Total
12-Month Let List initial construction authorization	8/20/2018	+\$50,700,000	\$50,700,000
FY 2017 TIGER Grant alignment correction	2/13/2020	+\$3,241,831	\$53,941,831
CSX Transportation rail agreement local funds	11/3/2022	+\$464,000	\$54,405,831
Norfolk Southern Railway rail agreement local funds	11/3/2022	+\$204,000	\$54,609,831
AFRA Request 000004016420 (Federal funds; FHWA approved 3/12/2025; BOT approved 4/3/2025) ¹⁴	3/12/2025	+\$17,000,000	\$71,609,831

The above table shows how BRUP’s funding grew from its original 2018 construction authorization to its September 2025 total. The funding rose from \$50.7 million to \$71.6

¹³ NCDOT ZFR13B Export for U-4437, WBS 35868.3.4, August 2018–September 2025; AFRA Request 000004016420; NCDOT Board of Transportation Agenda Item M, April 3, 2025.

¹⁴ The AFRA Request approved March 12, 2025, was the final funding action during the period covered by this table. BRUP received no additional funding actions between March 2025 and September 2025. The September 2025 end date reflects the cutoff of records reviewed by OSA, not a later funding change.

million, a 41% increase, driven mainly by rail agreements with CSX and Norfolk Southern and by a \$17,000,000 federal funding request (AFRA) approved in March 2025.

Table 3 shows how NCDOT’s stated completion target for BRUP moved over time. The date slipped from an original contractual Final Completion of July 31, 2023 to a current estimate of Spring 2027, a delay of nearly four years across the sources provided by NCDOT provided and the agency’s public statements.

Table 3: BRUP completion targets (October 2018-October 2025)¹⁵

Date Stated	Source	Stated Completion
October 2018	Contract C204157 Final Completion (Project Special Provisions, p. 1; Item C). Lane's Proposed Completion Date governed under the contract; ceiling was August 1, 2023.	July 31, 2023
October 2022	North Carolina State University Transportation article referencing Blue Ridge Road closure after the 2022 State Fair	Fall 2024
July 2024	NCDOT spokesperson statement (WRAL News)	2025 State Fair
August 2025	NCDOT spokesperson statement (ABC11 News)	End of 2026
October 2025	NCDOT Division 5 U-4437 Timeline (current)	Spring 2027

According to NCDOT, the closure of Blue Ridge Road was delayed by right-of-way acquisition, water-line relocation plan approvals, and final railroad ROE agreements. NCDOT opted for a single, extended road closure rather than a temporary detour, in order to recover the BRUP schedule. The agency informed OSA that it is currently negotiating with LCC to “establish a completion date for the Blue Ridge Road work that is independent from the I-440 widening.”

¹⁵ Contract C204157, Project Special Provisions, p. 1; NCDOT Item C, October 2, 2018; North Carolina State Transportation, “Blue Ridge Road Railroad Crossing to Close After State Fair” (October 2022); WRAL News, July 2024; ABC11 / WTVD News, August 2025; NCDOT Division 5 U-4437 Timeline, October 1, 2025.

FINDING 1 DETAILS & RECOMMENDATIONS

NCDOT does not maintain clear, public-facing, and BRUP-specific performance controls, even though the contract treats BRUP separately from the larger I-440 widening project.

Contract C204157 separates BRUP from the I-440 widening project at the funding level.

Despite this distinction, documents and reports reviewed by OSA treat the corridor as a single, unified project. As a result, BRUP-specific cost increases and delays are not consistently identified, making it more difficult for the public and other government agencies to track those impacts. NCDOT is currently negotiating with LCC to establish a BRUP completion date independent from the I-440 widening; however, the agency still has not disclosed any BRUP-specific milestones or performance metrics.

RECOMMENDATIONS

NCDOT should report BRUP costs and schedules separately, in line with the contract's Funding Differentiation provision. The agency should also track and enforce BRUP-specific milestones already in the contract, including ICT #1 and ICTs #22-23. When BRUP-specific milestones are missed, NCDOT should evaluate, document, and publicly report whether liquidated damages are supported by the contract, including the basis for assessing, waiving, reducing, or deferring any such damages, and the contract clauses that govern that determination.

Finally, although NCDOT's public project page lists a Blue Ridge Road Grade Separation completion year of 2027, the agency has not published a firm, contractually established completion date. NCDOT should establish a firm standalone completion date and milestones for BRUP and report progress against them publicly.

FINDING 2 DETAILS & RECOMMENDATION

Railroad ROE and approval processes cause delays and cost increases.

NCDOT informed OSA that, early in the project, obtaining a Right of Entry agreement delayed the contractor's ability to begin work within the railroad right of way. Construction on railroad property could not begin until the ROE was fully executed.¹⁶ NCDOT also stated that railroads are "third parties with strict submittal and safety requirements," that review periods and

¹⁶ Liam W. Shannon email, September 26, 2025; Contract C204157, Project Special Provisions, Protection of Railroad Interest - NCRR and NSR; Local Fund Agreement, CSX Transportation, Inc. (executed August 31, 2021).

approvals "can extend schedules and are outside NCDOT's direct control but are managed collaboratively with the contractor," and that delays "stem from submittal reviews, right-of-entry processes, and safety requirements" rather than from rebooking railroad windows.¹⁷ Under the Local Fund Agreement with CSX, the railroad may take up to 30 days to review submittals and up to an additional 30 days to review resubmittals returned not approved.¹⁸ The October 1, 2025 NCDOT Timeline also acknowledges that right-of-way acquisition, water-relocation plan approvals, and final railroad ROE agreements delayed the closure of Blue Ridge Road until after the 2022 State Fair.

Supplemental agreements show the cost of these delays and changes. Supplemental Agreement No. 58 (November 2023; \$66,238.69) covered extra work needed because "delays in submittal approval by the associated railroad entities," along with the need to open the roadway before the 2023 State Fair, kept earlier work from being completed when expected. Supplemental Agreement No. 66 (February 2025; \$21,629.54) was issued because Norfolk Southern, after originally approving the track plans, changed a design requirement that forced a redesign of the trackbed. Supplemental Agreement No. 69 (April 2025; \$1.5 million) states that the railroads' influence on the permanent trackbed work "gradually increased," with final plans including "substantial full roadbed reconstruction with the potential for significant undercut throughout the existing trackbed."¹⁹

In a September 26, 2025 email to OSA, NCDOT stated that "the contractor develops and maintains the schedule and coordinates directly with the railroads for flagging and inspection." In its response to this report, NCDOT stated that the Design-Build Team has maintained a project submittal tracking log throughout Contract C204157 that includes railroad-related submittals, with submission and return dates, review durations, and the responsible party.²⁰

RECOMMENDATION

NCDOT should use the Design-Build Team's submittal tracking data to compare railroad review durations against the timeframes in the railroad agreements and to document the cumulative cost and schedule impact of railroad-related delays and changes on BRUP. In its response, NCDOT states that its Rail Division is providing expanded support to assist with tracking and facilitating railroad reviews; that support should include this analysis. For future projects with extensive work in active rail corridors, NCDOT should consider assigning an NCDOT railroad coordinator to track ROE and railroad approvals directly, consistent with

¹⁷ Liam W. Shannon email, September 26, 2025.

¹⁸ Local Fund Agreement, CSX Transportation, Inc. (executed August 31, 2021), p. 16.

¹⁹ NCDOT Contract C204157 Supplemental Agreements log, SA Nos. 58.0, 66.0, and 69.0.

²⁰ Liam W. Shannon email, September 26, 2025; NCDOT response to draft report, September 22, 2026.

peer practices such as the Indiana Department of Transportation's Certified Railroad Coordinators.

FINDING 3 DETAILS & RECOMMENDATION

NCDOT relies on a progress schedule, rather than a CPM schedule, for project oversight.

A Critical Path Method (CPM) schedule is a project-management tool that maps every task, its duration, and its dependencies, then calculates the longest chain of linked activities, the "critical path," that determines the project's completion date. When a CPM is updated regularly, any delay on a critical-path activity shows directly how the completion date moves and which specific event caused the slip. A progress schedule, by contrast, lists tasks, estimated durations, and percent completion at a point in time, but does not calculate critical-path impacts. Contract C204157 does not require a CPM. The contract's Schedule of Estimated Completion Progress provision sets out only fiscal-year percentage targets and refers the Design-Build Team to Section 108-2 of the 2018 NCDOT Standard Specifications for Roads and Structures for its own progress schedule. Under that contract provision, LCC was to earn 99 percent of the contract value by the end of FY 2023 (June 30, 2023), with the remaining 1 percent in FY 2024. Under Article 108-2, the progress schedule is required only once at the outset of the contract, with an update required only if the completion date is extended or anticipated overrun exceeds 5%. NCDOT informed OSA that it has received the required progress schedules and cash-flow charts, but the agency does not use a CPM for oversight or public updates.

This omission limits NCDOT in three ways. First, without a CPM, NCDOT cannot clearly show how ROE delays, weather, utility relocation, and soil issues affect the BRUP completion date as construction progresses. Second, a progress schedule does not give NCDOT the analytical basis required to defend against contractor claims. Resolving construction delay claims depends on demonstrating which specific events extend the project's critical path, and by how many days; the CPM is the basis for the recognized industry framework for that analysis. Without a maintained CPM, NCDOT cannot quantify delay attribution event by event, which weakens its position in change-order negotiations, time-extension reviews, and liquidated-damages assessments. Third, without a maintained CPM, neither NCDOT nor the public can independently assess whether the project can recover from its current delays or whether further slippage is likely.

RECOMMENDATION

NCDOT should implement a CPM schedule for the BRUP and future projects, update the CPM monthly, and use it for both internal review and public reporting.

FINDING 4 DETAILS & RECOMMENDATION

NCDOT does not have a structured, BRUP-specific process to track and manage geotechnical and utility conditions encountered during construction.

LCC's contract assigns primary responsibility for subsurface investigations to the Design-Build Team. The contract states that the team "shall be responsible for additional investigations and for verifying the accuracy of the subsurface information supplied by the Department." LCC must also retain a pre-qualified geotechnical firm, determine whether additional subsurface investigation is necessary, and submit any additional findings to NCDOT for review and acceptance.

NCDOT informed OSA that, because the railroad would not allow drilling in the active right of way, LCC could conduct only limited geotechnical investigation before the start of BRUP construction. Project designers relied on conservative assumptions, which required expensive adjustments after the fact when designers encountered poor soil quality during construction. Addressing these issues required significant, and time consuming, coordination among NCDOT, the City of Raleigh, and LCC. Yet, even now, no centralized process exists for recording soil conditions, restricted work zones and mitigation actions, and for incorporating those risks into the project schedule.

RECOMMENDATION

NCDOT should create a BRUP geotechnical and access log that documents subsurface conditions and access restrictions encountered during construction. The agency should also tie major utility work to project milestones and integrate geotechnical and utility risks identified during construction directly into CPM scheduling.

FINDING 5 DETAILS & RECOMMENDATION

NCDOT does not publicly report BRUP-specific weather delays in a consistent or timely way.

NCDOT informed OSA that non-workable weather days are recorded internally and analyzed near the end of projects. In the case of BRUP, named storms, including Ian, Idalia, Ophelia, Debby, and Helene, caused multiple work stoppages. NCDOT's storm list also included Hurricane Dorian (2019) which predates the October 2022 start of BRUP construction. NCDOT maintains a public project page for the I-440 corridor and issues periodic public statements about the corridor as a whole. Because BRUP statistics are bundled with the larger I-440 corridor in that public reporting, weather impacts specific to BRUP are not separately identified for the public.

RECOMMENDATION

NCDOT should publish a simple BRUP dashboard displaying anticipated completion dates, weather and storm impacts, railroad approval status, utility relocation progress, BRUP-specific spending, and the status of any liquidated damages, so as to provide clear and consistent information to the public.



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

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September 22, 2026

The Honorable David L. Boliek
State Auditor
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Subject: Response to Draft Rapid Response Special Report – Blue Ridge Road Underpass Project

The North Carolina Department of Transportation appreciates the opportunity to review and respond to the Office of the State Auditor's draft Rapid Response Special Report regarding the Blue Ridge Road Grade Separation, STIP Project U-4437.

NCDOT recognizes the importance of effective project administration, clear public communication, and applying lessons learned from complex transportation projects. U-4437 is part of Contract C204157, a single design-build contract that also includes the I-440 improvements under STIP Project U-2719. The Blue Ridge Road Grade Separation work has required extensive coordination involving active railroad operations, multiple railroad entities, complex right-of-way acquisition, major utility relocations, restricted access, subsurface conditions, and other third-party requirements.

NCDOT has reviewed the five findings and associated recommendations and provides the following responses.

Response to Finding 1 – BRUP-Specific Performance Controls and Public Reporting

NCDOT recognizes the value of providing clear, project-specific information to the public. U-4437 and U-2719 were procured and are administered under a single design-build contract, while funding for the two projects is maintained under separate Work Breakdown Structures. NCDOT will maintain the existing contract and financial administration structure through project completion while improving public-facing information specific to the Blue Ridge Road Grade Separation.

NCDOT will update the project website to provide a more specific anticipated completion milestone for the Blue Ridge Road work. The Department is also developing enhanced public communication tools, including [Projects Near Me](#) and expanded email and text notification capabilities. These tools are intended to provide clearer and more timely construction project information, including project status, percent completion, cost information, and anticipated completion dates where available.

Contract milestones, contract time, and any applicable liquidated damages will continue to be evaluated and documented in accordance with the contract. Because liquidated damages determinations may change as a result of contract adjustments, time extensions, and other outstanding contract administration matters, any public reporting should distinguish preliminary

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evaluations from final contract determinations. Final liquidated damages determinations may not be available until project closeout and resolution of outstanding contract matters.

The Division 5 Resident Engineer, or the Division Construction Engineer while the Resident Engineer position is vacant, in coordination with the NCDOT Communications Office and appropriate central business units, will be responsible for implementing BRUP-specific public information updates. The project website will be updated following finalization of the current anticipated completion milestone, with broader communication-tool enhancements implemented as those Department initiatives become available.

Response to Finding 2 – Railroad Right-of-Entry and Approval Tracking

NCDOT agrees that effective railroad coordination is particularly important on projects involving extensive construction within active railroad corridors.

NCDOT would like to clarify that, as part of its contractual rail coordination responsibilities, the Design-Build Team has maintained a project submittal tracking log throughout Contract C204157 that includes railroad-related submittals. The tracking information includes submission and return dates, review durations, and the party responsible for the submittal. In addition, the NCDOT Rail Division is providing expanded support to assist with tracking and facilitating railroad reviews.

Coordination with the affected railroad entities remains dependent on third-party access, review, approval, inspection, flagging, and operational requirements. NCDOT will continue using the existing project and Rail Division coordination resources to track and facilitate the remaining railroad-related work through project completion.

The Division 5 Resident Engineer, or the Division Construction Engineer while the Resident Engineer position is vacant, supported by NCDOT Rail Division staff, will be responsible for coordinating and tracking the remaining railroad reviews, approvals, access requirements, and related activities through completion of the railroad-related work.

Response to Finding 3 – Progress Schedule and CPM Scheduling

Contract C204157 did not require the Design-Build Team to provide a Critical Path Method (CPM) schedule. NCDOT administered the project in accordance with the scheduling requirements established in the contract, using the required progress schedules along with other project records and documentation to monitor progress and evaluate schedule impacts, contract adjustments, and claims.

NCDOT recognizes the value of CPM scheduling as a project-management tool for large and complex construction projects. Since this contract was let, NCDOT has implemented CPM scheduling requirements on projects where project size, complexity, or contract structure warrants that level of schedule control. The Department will continue applying those requirements, as appropriate, to future projects of similar size and complexity.

Because CPM scheduling was not a contractual requirement for Contract C204157 and the project is in the latter stages of construction, NCDOT does not propose retroactively imposing a new CPM requirement on this contract. Public-facing schedule information will continue to be communicated through appropriate project information and communication tools.

No additional corrective action is planned for Contract C204157 regarding CPM scheduling.

Response to Finding 4 – Geotechnical and Utility Conditions

Utility and geotechnical coordination have been significant components of the Blue Ridge Road Grade Separation. Throughout the project, regular utility coordination meetings have been conducted with the contractor and affected utility owners consistent with the contract requirements. These meetings have provided an established process for coordinating utility relocations and resolving issues affecting construction.

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Geotechnical investigation within the active railroad corridor was more constrained than would typically occur on a conventional roadway project because access and drilling activities were subject to railroad restrictions and active rail operations.

NCDOT does not propose creating a separate BRUP-specific geotechnical and access log at this stage of the project. The Division 5 Resident Engineer, or the Division Construction Engineer while the Resident Engineer position is vacant, will continue documenting and managing remaining geotechnical, access, and utility matters through the project's existing records, coordination meetings, and contract administration processes through project completion.

The Department will also consider lessons learned from this project, including third-party access, utility coordination, geotechnical risk, and appropriate allocation of those risks, when evaluating procurement and project-delivery approaches for future projects with similar characteristics.

Response to Finding 5 – Weather Delay Reporting

NCDOT documents weather and non-workable conditions as part of its project records and evaluates weather impacts in accordance with the contract.

For Contract C204157, weather-related contract time is governed by Article 108-10(B) of the applicable NCDOT Standard Specifications. Under that process, weather is evaluated in relation to its effect on the controlling operation and the applicable contract-time provisions. Individual weather events or non-workable days therefore do not automatically constitute an equivalent amount of contract delay or an extension of the project completion date.

Accordingly, public schedule information is most useful when it reflects evaluated project impacts and the current anticipated completion milestone rather than a running tally of individual weather days that may or may not ultimately affect contract time. NCDOT does not propose publishing a separate running tally of weather days because individual weather events do not necessarily translate directly into changes to the project completion date.

The Division 5 Resident Engineer, or the Division Construction Engineer while the Resident Engineer position is vacant, will be responsible for ensuring that weather-related contract impacts are documented and evaluated in accordance with the contract through project completion. NCDOT will continue communicating current project status through its public project information resources.

NCDOT appreciates OSA's review of this complex project and the opportunity to provide comments on the draft report. The Department remains focused on safely completing the Blue Ridge Road Grade Separation and will continue applying lessons learned from this project to improve the delivery and communication of future complex transportation projects.

Sincerely,

DocuSigned by:

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E. Boyd Tharrington, PE
Senior Deputy Chief Engineer
Division of Highways
North Carolina Department of Transportation

SUPPORTING DOCUMENTS

1. Email: Liam W. Shannon, PE to Austin Biggs (September 26, 2025).
2. NCDOT Division 5 U-4437 (C204157) Timeline (October 1, 2025).
3. NCDOT ZFR13B Export for U-4437 (WBS 35868.3.4), reflecting funding actions from August 2018 through September 2025.
4. AFRA Request 000004016420 (“TIP Funding Request”) for \$17,000,000.00, submitted February 17, 2025; FHWA approval March 12, 2025; Board of Transportation Agenda Item M approval April 3, 2025. BOT meeting archive: <https://www.ncdot.gov/about-us/board-offices/boards/board-transportation/Pages/archives.aspx> (April 3, 2025 meeting materials).
5. NCDOT Contract C204157 Supplemental Agreements log (26 SAs through April 2025), including SAs 21.0, 30.1, 53.0, 54.0, 56.0, 58.0, 65.0, 66.0, and 69.0.
6. NCDOT, Item C: U-2719 / U-4437 (Highway Letting, October 2, 2018), establishing Lane Construction Corporation as the awarded Design-Build Team at a price-proposal amount of \$346,200,000, quality-adjusted award basis \$259,650,000, with a contract completion ceiling of August 1, 2023 and Lane's proposed Final Completion date of July 31, 2023. Source: NCDOT Connect Letting page, https://connect.ncdot.gov/letting/pages/Design-Build-Letting-Details.aspx?let_id=U-2719+and+U-4437.
7. NCDOT, U-2719 U-4437 C204157 Award Letter (October 23, 2018). Source: NCDOT Connect Letting page, https://connect.ncdot.gov/letting/pages/Design-Build-Letting-Details.aspx?let_id=U-2719+and+U-4437.
8. Contract C204157, Project Special Provisions: Contract Time and Liquidated Damages (p. 1); Intermediate Contract Time Number 1 & Liquidated Damages / Incentive (pp. 1–2); Other Liquidated Damages and Incentives (pp. 3–5); Funding Differentiation (p. 5); Required Provision for TIGER Grant (p. 5); Schedule of Estimated Completion Progress (p. 16); Subsurface Information (p. 68).
9. Contract C204157, Project Special Provisions: Protection of Railroad Interest – NCRR and NSR (pp. 32–54); Railroad General Special Provisions – CSX Transportation, Inc. (pp. 55–65).

10. Contract C204157, Scopes of Work: Geotechnical Engineering (pp. 275–285); Right of Way (pp. 341–345); Transportation Management (pp. 385–420); Utilities Coordination (pp. 420–428).
11. Local Fund Agreement with CSX Transportation, Inc. (executed August 31, 2021).
12. Local Fund Agreement with Norfolk Southern Railway Company (executed September 22, 2021).
13. North Carolina State Transportation, “Blue Ridge Road Railroad Crossing to Close After State Fair” (October 2022). Source: <https://transportation.ncsu.edu/2022/10/blue-ridge-road-railroad-crossing-to-close-after-state-fair/>.
14. NCDOT Project Page, “I-440 & Blue Ridge Road Improvements,” <https://www.ncdot.gov/projects/i-440-improvements/Pages/default.aspx>
15. (project description, contractor, contract amount, and current Blue Ridge Road completion target).
16. WRAL News, “Engineers expect Blue Ridge Road underpass to be ready for 2025 state fair” (July 2024), <https://www.wral.com/story/engineers-expect-blue-ridge-road-underpass-to-be-ready-for-2025-state-fair/21515814/>.
17. ABC11 / WTVD News, “Blue Ridge Road Project 2 years behind scheduled completion: NC Department of Transportation” (August 2025), <https://abc11.com/post/blue-ridge-road-project-2-years-behind-scheduled-completion-nc-department-transportation/17598290/>.
18. Indiana Department of Transportation, Certified Railroad Coordinators (Indiana Design Manual, Chapter 105 Railroad Coordination), <https://www.in.gov/dot/div/contracts/design/Part%20201/Chapter%20105%20Railroad%20Coordination.pdf>
19. ; Ohio DOT District Railroad Coordinators (Railroad Coordination Policy & Procedures Manual), <https://www.transportation.ohio.gov/working/engineering/real-estate/real-estate-manual/1000-railroads>

20. ; Wisconsin DOT Region Railroad Coordinators (Facilities Development Manual, Chapter 17), <https://wisconsindot.gov/rdwy/fdm/fd-17-10.pdf>.
21. Comparable peer projects: South Town Street Grade Separation in Fostoria, Ohio (ODOT Project 119654), <https://www.transportation.ohio.gov/projects/projects/119654>
22. ; Hivley Avenue Grade Separation in Elkhart, Indiana (Designation Number 1801933), <https://www.in.gov/indot/files/1801933-Hivley-Ave-Overpass-Appendix-G-Part-2.pdf>.

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