



I-85 Widening from US 321 to East of NC 273

STIP Project Nos. I-5719, U-5800, & U-6044

Gaston County

Project Management Plan

Submitted: 01/08/2025



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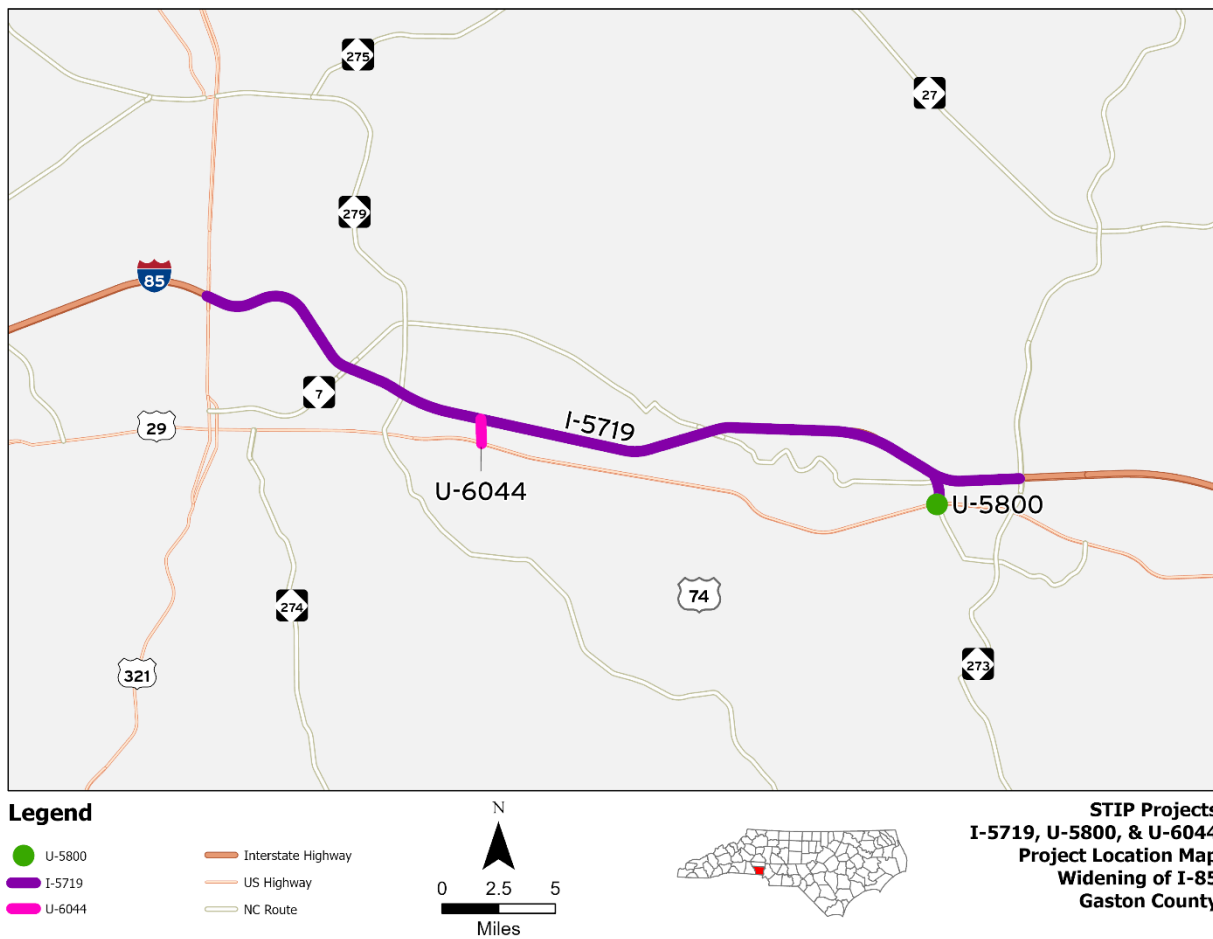
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1. Introduction

The North Carolina Department of Transportation (NCDOT) proposes to construct three projects along Interstate 85 (I-85). State Transportation Improvement Program (STIP) project I-5719 widens I-85 in Gaston County from US 321 (Exit 17) in Gastonia to NC 273 (Exit 27) in Belmont/Mt. Holly, about 9.8 miles. STIP Project U-5800 proposes improvements to the intersection of NC 7 (North Main Street) and US 29/74 (Wilkinson Boulevard) in Belmont. STIP Project U-6044 proposes improvements to Cox Road from I-85 south to US 29/74 (East Franklin Boulevard). Exhibit 1 shows the locations of each project.

Exhibit 1. STIP Projects I-5719, U-5800, and U-6044.



2. Project Purpose, Goals, Objectives, and Metrics

The purpose of the proposed improvements to I-85 (STIP Project I-5719), is to reduce congestion and improve mobility in this growing area of Gaston County. The proposed improvements will address existing and projected capacity deficiencies and mobility issues along I-85, which currently experiences

heavy traffic conditions leading to frequent congestion and delays. The new design will include features that accommodate increased traffic volumes projected to rise by 15 to 24 percent between 2016 and 2040, with all segments expected to reach a level of service (LOS) F during peak periods.

The purpose of the improvements to the intersection of North Main Street and US 29/74 (Wilkinson Boulevard) (STIP Project U-5800) is to improve traffic operations and safety at the intersection.

The purpose of STIP Project U-6044, improvements to Cox Road from I-85 to US 29/74 (East Franklin Boulevard), is to reduce delays and increase the capacity of intersections, while also improving pedestrian mobility in the immediate vicinity.

2.1 Goals and Objectives

The overall project management goals and objectives of the I-85 Widening Project are to design and construct the project to quality standards within the project budget, scope, and the approved schedule.

Project goals and objectives will be tracked as the project progresses through design and construction. NCDOT will review the project schedule monthly. Ongoing project coordination meetings will continue during construction to address any issues proactively. These meetings will specifically address schedule, budget, quality, safety, and environmental concerns.

The Senior Leadership Team will provide high-level oversight of the project parameters. The Project Manager and the Resident Engineer will regularly update the Senior Leadership Team and alert them of any risks or changes that may affect the project scope, budget, or schedule.

2.2 Metrics

The process to meet the overall project goals and objectives includes the following:

- Construct the I-85 widening to current AASHTO standards for the highway system;
- Complete the project within the time frame allotted;
- Complete the project within the designated budget;
- Complete the project within all quality standards;
- Complete the project with no lost man days due to safety;
- Maintain mobility safety and provide adequate maintenance of traffic operations along I-85 and adjacent/associated roads;
- Maintain communications with internal and external stakeholders; and
- Complete the project with a sound environmental record.

3. Project Description

The I-85 Widening Project collectively includes STIP projects I-5719, U-5800, and U-6044. STIP Project I-5719, I-85 Widening, will improve approximately 10 miles of I-85 in Gaston County, North Carolina (NC) from the US 321 interchange (Exit 17) in Gastonia to the NC 273 interchange (Exit 27) in Belmont and Mount Holly. Work includes widening I-85 from six to eight lanes and relocating, replacing, or improving eight interchanges, six roadway and four railroad bridges. In addition to the widening of I-85, the project includes implementation of flood risk strategies, addition of EV charging ports, installation of broadband fiber, and implementation and installation of ITS in various locations from the NC/SC border to NC 273.

STIP Project U-5800 will provide operational improvements to the intersection of NC 7 (N. Main Street) and US 29/74 (Wilkinson Boulevard) south of I-85. Similarly, U-6044 will provide selective widening and operational improvements to Cox Road (SR 2200), south of I-85, and the US 29/74 (E. Franklin

Boulevard) intersection. These improvements include the addition of through lanes and turn lanes, as well as the addition of sidewalks and multi-use paths.

Due to the varied and complex nature of delivering the Project, NCDOT has chosen to deliver its construction in phases as detailed in Exhibit 2 and shown in the timeline in Exhibit 3 The locations of the different project phases are shown in Exhibit 4.

Exhibit 2: Description of Project Phases

Project Number	STIP Projects Included	Location	Work Description
I-5719A (Design-Build)	I-5719A	I-85 from US 321 (Exit 17) to NC 7 (McAdenville Road / North Main Street) (Exit 23)	Widen I-85 to 8 lanes, replace / improve 4 roadway interchanges, replace 4 roadway bridge overpasses, and rehabilitate the US 321 bridge
	I-5719FA		Install Active Traffic Management (Ramp Meters, Variable Speed Limit signs, etc) and Incident Management
	U-6044	Cox Road from I-85 south to US 29/74 intersection	Selective widening and operational improvements to Cox Road (SR 2200).
I-5719B (Design-Build)	I-5719B	I-85 from NC 7 (McAdenville Road / North Main Street) (Exit 23) to east of NC 273 (Beatty Drive) (Exit 27) includes P&N Belmont Spur bridge and associated track	Widen I-85 to 8 lanes, replace / improve 2 roadway interchanges, replace 1 roadway overpass, rehabilitate/widen I-85 bridge over S. Fork Catawba River, replace the P&N Belmont Spur Line Railway bridge, reconstruct 0.7 miles of railway, and rehabilitate the NC 273 bridge
	I-5719FB		Install Active Traffic Management (Ramp Meters, Variable Speed Limit signs, etc) and Incident Management
	U-5800	NC 7 (North Main Street) south of I-85, including the intersection of NC 7 and US 29/74	Improvements to NC 7 (North Main Street) and operational improvements to the intersection with US 29/74
I-5719C (CM/GC)	I-5719C	P&N Railway Bridge, 2 NSR Bridges and Groves Street bridge within the limits of I-5719A	Reconstruction of 3 railway bridges and the Groves Street roadway overpass.
I-5719D, E, FC, & FD	I-5719D (Bid-Build)	Implementation of Flood Risk, Vulnerability Assessment and Flood Warning System from the NC/SC state line to NC 273 along I-85	
	I-5719E (Bid-Build)	Installation of electric vehicle charging ports from the NC/SC state line to NC 273 along I-85	
	I-5719FC (Design-Build)	Installation of broadband from the NC/SC state line to US 74	
	I-5719FD (Bid-Build)	Implementation of ITS Statewide Resilience, Connected Vehicle Technology, and Traveler Information from the SC/NC state line to NC 273 along I-85	

*CM/GC: Construction Manager / General Contractor

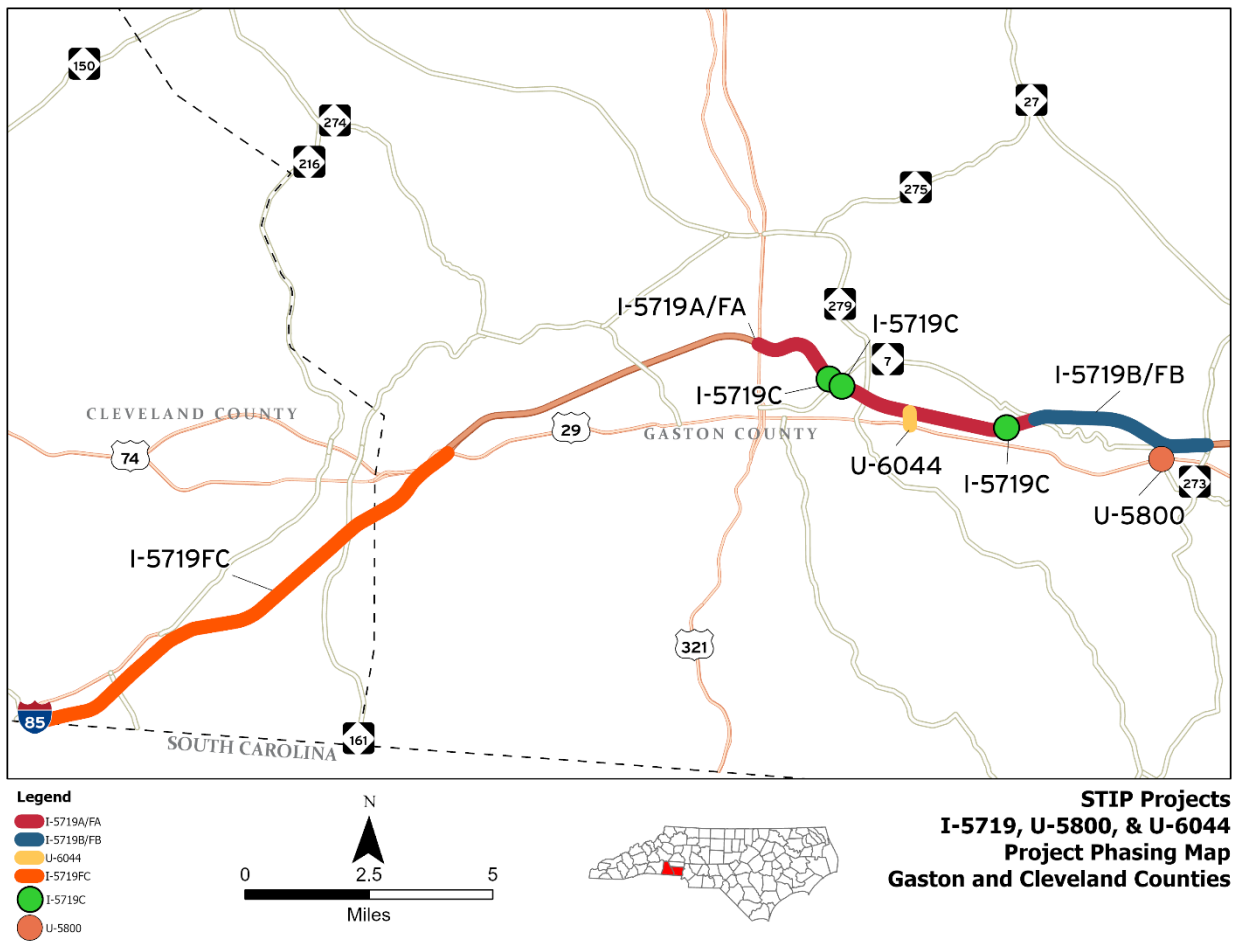
Exhibit 3: Project Implementation Timeline

Activity	2024				2025				2026				2027				2028				2029				2030				2031				2032				2033											
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4								
I-85 Widening - I-5719A																																																
PE																					11				09																							
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CN/UT (A)																					11																				09							
I-85 Widening - I-5719B																																																
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CN/UT (B)									06																																08							
I-85 Widening - I-5719C																																																
PE									01				09																																			
ROW													11				12																															
CN/UT																	08																												03			

Notes:

1. PE phase includes owner design, NEPA, and DB (or CM/GC) procurement.
2. ROW acquisition will be led by the design-builder.
3. CN/UT includes DB (or CM/GC) final design, construction, and utility relocations.

Exhibit 4: I-5719 Phases A/FA, B/FB, C, and FC, U-5800, and U-6044 Project Phasing Map



Source: NCDOT, HNTB

In February 2019, due to its proximity to the Belmont-Mt. Holly Road interchange with I-85, STIP Project U-5800 was included in an environmental study with I-5719. A Categorical Exclusion (CE) for these projects was signed July 1, 2024. STIP Project U-6044 was studied independently and its CE was signed May 8, 2024.

In 2022, NCDOT was awarded a grant under the Nationally Significant Multimodal Freight & Highway Projects (INFRA) program. In addition to the widening of I-85, the project includes implementation of flood risk strategies, addition of EV charging ports, installation of broadband fiber, and implementation and installation of ITS in various locations from the NC/SC border to NC 273. These additional items are included as part of I-5719 as construction phases D, E, and FA through FD. These phases have independent utility and will have independent environmental studies, though all are expected to be categorically excluded.

4. Project Procurement

4.1 Contracting Mechanisms

As shown in Exhibit 2, NCDOT will deliver the I-85 Widening Project using multiple contracting methods including Design Bid Build (DBB), Design-Build (DB), and Construction Manager/General Contractor (CM/GC). These different mechanisms allow NCDOT to choose the best approach to accelerate delivery, reduce cost through innovation, and better mitigate the design and construction risks. NCDOT retains operations and maintenance responsibilities.

4.1.1 Pre-Construction Phase

In 2015, HNTB was contracted to provide preliminary design plans and environmental studies. NCDOT will provide these plans to the Design Build teams to include in their proposals for I-5719A and I-5719B. I-5719C will be delivered using the CM/GC method. NCDOT selected HNTB as the private engineering firm (PEF) for development of final design.

4.1.2 Construction Phase

The project has been broken down into phases for delivery purposes as shown in Exhibits 2 and 3. The following describes the phases based on their construction schedules.

I-5719C

The CM/GC project delivery method allows the use of a construction manager during the design process to provide input on the design. During the design phase, the construction manager provides advice, including constructability review, scheduling, pricing, risk analysis, and phasing, to assist in designing a more efficient and well-designed project. The construction manager may subsequently act as the general contractor and construct the project if the Department and the CM/GC reach agreement on a price for construction. HNTB was selected to provide final design services for I-5719C in September 2024. The timeline for procurement of a CM/GC for design of this phase is included in Appendix C, along with the Request for Letters of Interest (RFLOI) Addendum 2. Additional materials can be found on the Design-Build Letting Details for I-5719C: https://connect.ncdot.gov/letting/Pages/Design-Build-Letting-Details.aspx?let_id=I-5719C

I-5719B/FB and U-5800

I-5719B/FB and U-5800 will use a Design Build procurement method. NCDOT issued a Request for Qualifications (RFQ) on September 3, 2024, and short-listed teams on October 16, 2024. The timeline for procurement for Design Build of I-5719B and the First Industry Draft Request for Proposals (RFP) are included in Appendix D. Additional materials can be found in the Design Build Project Details for I-5719B and U-5800: https://connect.ncdot.gov/letting/Pages/Design-Build-Letting-Details.aspx?let_id=I-5719B%20and%20U-5800

Updates of this Project Management Plan (PMP) will detail the procurement of additional project phases as they occur.

4.1.3 Right of Way Acquisition

Right of way acquisition for this project will occur within the construction phases of the Project and will follow the procedures outlined in the Uniform Relocation Assistance and Real Property Acquisition Act of 1970.

5. Project Organizational Management

NCDOT has implemented a Project Team for the I-85 Widening Project. This team consists of senior management, central support units, Division-level management and staff, consultants, and contractors. The organization chart below represents the structure of the Project Management Team. As details of the CM/GC, Design Build and Design Bid Build teams become known they will be included in Annual Updates to this PMP.

Exhibit 5: I-85 Widening Project Organization Chart



Exhibit 6: I-85 Widening Project Team Members

Senior Leadership Team		
Yolanda K. Jordan	FHWA NC Division Administrator	yolonda.jordan@dot.gov
Mark Stafford, P.E.	NCDOT Division 12 Engineer	mstafford@ncdot.gov
Project Management Team		
Nora McCann, E.I.T.	NCDOT PMU Project Manager	namccann@ncdot.gov
Michael Penney, P.E.	NCDOT ADU Project Manager	mpenney@ncdot.gov
Tamara Njegovan	NCDOT ADU Project Engineer	tnjegovan@ncdot.gov
Coleman Clarence, P.E.	DOT Preconstruction & Environment Director	clarence.coleman@dot.gov
Bryan Sowell, P.E.	NCDOT Division 12 Project Team Lead	bksowell@ncdot.gov
Cole Gurley, P.E.	NCDOT Division 12 Deputy Division Engineer	cgurley@ncdot.gov
Brad Hibbs, P.E.	FHWA Operations Engineer	bradley.hibbs@dot.gov
David Wasserman	Deputy Director of the Division of Planning and Programming	dswasserman@ncdot.gov
Kat Bukowy, AICP	HNTB Project Manager	kbukowy@hntb.com
Construction Management Team		
Matthew Seymour, P.E.	NCDOT Division 10 Major Projects Engineer	matthew.seymour@dot.gov
William Beatty	FHWA NC Division Asset Management Program Manager	william.beatty@dot.gov
Michael Penney, P.E.	NCDOT ADU Project Manager	mpenney@ncdot.gov
Tamara Njegovan	NCDOT ADU Project Engineer	tnjegovan@ncdot.gov
Cole Gurley, P.E.	NCDOT Division 12 Deputy Division Engineer	cgurley@ncdot.gov
Rodney Gantt, P.E.	NCDOT Division 12 Construction Engineer	rwgantt@ncdot.gov
Christian Listoe, P.E.	NCDOT Division 12 Staff Construction Engineer	calistoe@ncdot.gov
Jeff Wyatt	NCDOT Division 12 Division Environmental Officer	jlwyatt@ncdot.gov
Todd Hiatt, P.E.	NCDOT REU Field Operations Engineer	tmhiatt@ncdot.gov

5.1 Project Team Organization

5.1.1 Senior Leadership Team

The Senior Leadership Team includes the NCDOT Division 12 Engineer working in conjunction with the FHWA NC Division Administrator to ensure coordination and compliance at the State and Federal levels. Senior Leadership Team oversees the project within the larger NCDOT program.

The Senior Leadership Team has the following responsibilities for the project:

- Overall leadership for NCDOT and FHWA Management through project design and construction;
- Resolve coordination issues within the Construction Management Team and Project Development Team;
- Point of contact for senior leaders of key stakeholders and resource agencies;
- Monitor progress of the project;
- Assure proper resources are provided from the Division and Units to support the project;
- Make policy decisions for the project; and
- Provide support to the Project Management Team and Construction Management Team, in relation to regional and national stakeholders.

5.1.2 Project Management Team

As noted in Section 4.2, delivery of the project can be broken into pre-construction and construction phases and is overseen by a Project Management Team. The pre-construction phase ensures the project meets environmental compliance under the National Environmental Policy Act (NEPA) of 1970, as amended, and other laws and regulations. It also includes preliminary engineering design, as appropriate. The pre-construction phase includes procurement of services under DBB, DB, or CM/GC contracts.

To deliver the pre-construction phase of the project, NCDOT assigned a Project Management Unit (PMU) Project Manager, who coordinated and collaborated with NCDOT Division 12 and various additional subject matter experts (SMEs) from NCDOT's Roadway, Railroad, Environmental Analysis, Environmental Policy, and Structures units, among others. The PMU Project Manager was primarily responsible for ensuring that project development, through signing of the environmental document, was completed within the scope, schedule, and budget, while meeting all state and federal laws.

The PMU Project Manager also collaborates with the Alternative Delivery Unit (ADU), which is responsible for the procurement of the DB and CM/GC procurement and contracting in the construction phase. The ADU is also responsible for:

- Leading implementation and delivery of CM/GC and DB construction phases of the project;
- Approving change orders affecting substantial changes in scope, budget, or schedule; and
- Assisting in contract administration during construction.

ADU is also the liaison between the Project Management Team and the FHWA Major Projects Oversight Manager.

5.1.3 Construction Management Team

NCDOT will advance construction of the project through design-build contracts and a CM/GC contract. Such contracts afford construction firm input in final design of the project, acquisition of permits, acquisition of right of way, utility coordination and design, and ultimately project construction. Under the DB and CM/GC procurement methods right of way acquisition, utility design, and construction can begin

as final design progresses.

The NCDOT Construction Management Team includes ADU, as well as the Division Construction Engineer for Division 12, NCDOT Resident Engineers, Public Involvement Officer, and construction contractor. The Construction Management Team is responsible for the oversight and administration of the contract to construct the phases of the project and will ensure efficient and effective management of the project quality, scope, cost, and schedule. This includes:

- Managing the cost, scope, schedule, and document controls;
- Monitoring project performance and quality control;
- Providing technical and other support to the Project Development Team;
- Providing communication and project updates to the public;
- Administering the contract(s); and
- Ensuring project compliance with 2024 NCDOT Standards and Specifications for Roads and Structures, Federal, State, and local laws and regulations.

5.2 Construction Oversight and Construction Engineering & Inspection (CEI)

NCDOT Division 12 is responsible for construction management/construction oversight to manage/oversee the construction phases of the I-85 Widening Project. Accordingly, NCDOT will advertise for construction engineering and inspection (CEI) services as construction begins on the phases. Activities will include monitoring and reviewing project documentation to ensure that plans, specifications, standards, reporting, procurement, and construction follow applicable federal and state laws and regulations, as well as environmental commitments identified in the CEs. The NCDOT Division 12 Engineer is responsible for overseeing these activities.

5.3 Environmental Monitoring

The Division Environmental Officer (DEO) for Division 12 will monitor permit compliance associated with the project. This work includes the monitoring of items during each phase of the construction, including construction runoff water quality device inspections, hazardous material spill reporting and response, compliance with US Army Corps of Engineers Section 404 and NCDEQ-DWR 401 permit requirements, and notifications of unknown archeological discoveries. NCDOT Division 12's Environmental Officer will serve as the environmental coordinator to review and supervise this monitoring program.

5.4 Contract Closeout Plan

A formal process will be used to record constructability lessons learned throughout the project life. Key individuals involved in the project phases of design, construction, and management may be contacted to review issues encountered and lessons learned. Operations and maintenance personnel may be contacted to report on the completed project's performance. The feedback during the review process will enable planners, designers, and policymakers to incorporate the lessons learned into future projects. The main goal of the review process is to increase quality, reduce costs, increase safety, and reduce potential conflicts during the planning, design, administration, and construction phases of future projects.

6. Project Management Controls

The Project Management Team and Construction Management Team will ensure efficient and effective management of the project quality, scope, cost, schedule, and reporting to meet the goals of the project.

This will be accomplished by using the methods described in this section.

During the project's design phase, the Project Development Team will utilize NCDOT's CONNECT, a Microsoft SharePoint®-based document management service, Preconstruction site to ensure that the project team members have access to important project information. The specific project site can be found by including the project number (e.g. I-5719B_U-5800 or I-5719C) in the search box (Find a Site) at <https://connect.ncdot.gov/site/preconstruction/Pages/Default.aspx>

During the construction phase of the project, the Construction Management Team will also utilize a CONNECT Construction site (<https://connect.ncdot.gov/site/construction/Pages/default.aspx>). Project team members will utilize software developed by NCDOT for contract administration purposes, Highway Construction and Material Systems (HiCAMS), which allows the Department to keep track of materials, material testing and control, contract estimate payments, contract claims, and contract supplemental agreements.

6.1 Contract Administration

The Construction Management Team is responsible for the oversight and administration of the contracts to construct the I-85 Widening Project and will ensure efficient and effective management of the project construction phases in their quality, scope, cost, and schedule. The contracting methods will include CM/GC, DB, and DBB. These methods utilize Quality Assurance/Quality Control (QA/QC) methods for project acceptance. Contractors and the Construction Management Team will perform field and material testing as needed and as specified in contract documents and NCDOT standards and specifications. Compliance with these standards and specifications will be enforced through the rejection of work or through specified penalties based on non-conformance.

Contractors and the Construction Management Team will keep detailed records to monitor project progress up to and including project diaries, project schedules, material receipts, and certifications. These records are subject to audit by the FHWA and will be maintained on the CONNECT (Construction) sites.

Partial-pay estimates will occur monthly throughout the life of the project, with a final payment being issued when the project quantities and materials are verified. Quantities for contract line items are recorded as the work is being completed and are included with each monthly partial payment. Lump sum line items are paid for on a percentage completion basis as the work progresses.

6.1.1 Change Management

The Construction Management Team is responsible for any plan or material changes to the projects. Any changes that are necessary or warranted will be reviewed by the appropriate staff within the Construction Management Team before administering a Supplemental Agreement. Major plan revisions or cost escalations due to changes will be reviewed and approved by the Executive Leadership Team.

The information contained in the Supplemental Agreement will become a part of the contract documents. The Resident Engineer will author a Supplemental Agreement that is precise in which he completely understands the changes and is able to explain the change to the Contractor clearly. Such understanding and explanation allow the Resident Engineer and the Contractor to enter into the negotiation phase of the Supplemental Agreement by fully understanding the scope of the work. The Resident Engineer will begin investigating the need and fair price of Supplemental Agreement work without delay so thoroughness is not sacrificed for urgency. There will be rare occasions where work must proceed immediately; however, this will be the exception, not the rule. The Resident Engineer will request necessary documentation to justify the cost of performing work in the Supplemental Agreement.

The Resident Engineer of the Construction Management Team will negotiate all terms of the Supplemental Agreement with the Contractor's representative. During these negotiations, the Resident Engineer will confer with the NCDOT's representative with authority to approve the Supplemental Agreement. Supplemental Agreements will be created in and approved through HiCAMS by appropriate NCDOT and FHWA representatives. It is the Resident Engineer's responsibility to obtain FHWA concurrence. In addition to the terms that appear on the signed Supplemental Agreement, the Resident Engineer will document in HiCAMS justifications for performing the work and for the terms contained in the signed Supplemental Agreement. The electronic approval in HiCAMS is the official record of that action. After approval of the Supplemental Agreement by the NCDOT, the Contractor signs the Supplemental Agreement, the Resident will enter "Contractual Concurrence" in HiCAMS, and the Resident Engineer will also execute the Supplemental Agreement in HiCAMS for the NCDOT. Prior to payment for the work, approval of the Supplemental Agreement by all parties (including FHWA) must be documented in HiCAMS.

Supplemental Agreement approval authority for NCDOT, both verbal and written, is vested in the following individuals. This authority is extended for both the approval of the negotiated prices for extra work and extension of contract time necessary to accomplish the extra work.

- Resident Engineer: Supplemental Agreements for all Articles of the Specifications up to \$100,000 and associated time up to 30 days on all projects.
- Division Engineer: Supplemental Agreements for all Articles of the Specifications unlimited authority for compensation and time on all projects.

The Area Construction Engineer or State Construction Engineer review must be made prior to forwarding the Supplemental Agreement to the Contractor for his signature.

6.1.2 Claim Management

The Contractor will be required to give a written notice of intent to file a claim for additional compensation under the provisions of the 2024 *NCDOT Standard Specifications for Roads and Structures*. A written notice of intent to file a claim will include the following: (1) identify the project and plainly state that the document is a notice of intent to file a claim; (2) specifically identify the affected work and provisions of the contract upon which the claim is based; (3) specifically state the NCDOT's act or failure to act that is the basis for the claim; and (4) list all labor, equipment, materials, and overhead expenses that will be affected by the claim. When the Contractor gives apparent notice of intent to file a claim and such notice does not provide the information specified above, the Resident Engineer will immediately advise the Contractor to clarify the notice. No exception will be allowed to the requirement that written notice be given of intent to file a claim prior to performing the work. Verbal notice of intent is not acceptable and does not meet the requirements of the Specifications. A written notice will be required in all situations. A copy of each intent should be sent via e-mail to the Area Construction Engineer.

The Contractor will be required to submit separate records each week for each occurrence for which he has given notice of intent to file a claim. The Resident Engineer will promptly check the Contractor's records and notify him of any difference between the Contractor's records and the Resident Engineer's records. When the difference between the records cannot be resolved, the Resident Engineer will document the cause of the difference. In addition, the Resident Engineer will have his representative compare records with the Contractor's representative at the end of each day's operations and note in the diary any difference in the records. If the Resident Engineer cannot verify the records within seven (7) days, the Contractor will be notified in writing that the records have been received but not verified. In all cases, whether the records are verified or not, receipt should be acknowledged for each set of records

received, and the Contractor is advised that receipt of records does not imply validity of the claim.

If the Contractor chooses to pursue the claim after the disputed work is complete, he shall submit a written claim to the Resident Engineer for an adjustment in compensation based on his cost records within 120 calendar days after completion of the disputed work. The claim shall be accompanied by a certification from an officer of the company or person authorized to execute supplemental agreements, stating that the claim is truthful and accurate. The Contractor may submit a claim on the Contractor Claim Submittal Form (CCSF-1), located on NCDOT's website.

The following are the current procedures for processing Active Claims:

- Resident Engineer approval authority is \$100,000 and 30 days for active claims under all Articles of the Specifications. The Resident Engineer cannot deny any active claim.
- Division Engineer or his/her delegate approval and denial authority for active claims is unlimited under all Articles of the Specifications.
- Area Construction Engineer reviews all active claims over \$100,000 or 30 days.
- State Construction Engineer reviews all active claims over \$200,000 or 90 days.
- The Area Construction Engineer's and State Construction Engineer's active claim review will be made prior to notifying the Contractor of NCDOT's decision. Any approval of claims outside of those allowed by the Specifications will be forwarded to the State Construction Engineer for approval.
- If the dollar value or time on a specific claim exceeds the thresholds listed above, then the entire claim will be forwarded for review.

The following are the current turnaround times for processing Active Claims:

Claims up to \$100,000 or 30 days

- Contractor submits claim
- Resident Engineer reviews and approves within 10 days
 - If the Resident Engineer recommends denial of the claim, then the request should be forwarded to the Division Engineer within 10 days
 - The Division Engineer or his/her delegate reviews the Resident Engineer's recommendation of denial and approves or denies the claim within 10 days
- *PROCESS COMPLETE WITHIN ONE MONTH*

Claims between \$100,000 and \$200,000 or up to 90 days

- Contractor submits claim
- Resident Engineer reviews and sends recommendations for Area Construction Engineer to review within 20 days
- Area Construction Engineer reviews and forwards to Division Engineer with comments within 5 days
- Division Engineer or his/her delegate reviews and issues decisions within 5 days
- *PROCESS COMPLETE WITHIN SIX WEEKS*

Claims over \$200,000 or over 90 days

- Contractor submits claim
- Resident Engineer reviews and sends recommendations for Area Construction Engineer to review within 30 days

- Area Construction Engineer (State Construction Engineer) reviews and forwards to Division Engineer with comments within 10 days
- Division Engineer or his/her delegate reviews and issues decisions within 10 days
- *PROCESS COMPLETE WITHIN 2.5 MONTHS*

All final claims will be submitted directly from the Contractor to the State Construction Engineer. An active claim becomes a final claim once it has gone through the active claim process and project closeout process, and the Contractor still believes he is due additional compensation and/or an extension in the contract completion date. These final claims will be reviewed and responded to by the State Construction Engineer as part of the final estimate process.

6.2 Scope Management Plan

The project reporting and tracking measures via HiCAMS will be used to monitor the Contractor's work to ensure that the scope of work is being completed. The Contractor's monthly progress reports, which identify the work activities performed, open action items, and outstanding issues during the reporting period, are critical to NCDOT. The reports are utilized to monitor and validate the Contractor's work to ensure progress, as well as to minimize deviation from the scope.

The FHWA Division Administrator, or representative, will have access to all the project reports and will be kept well-informed if the planned scope of work is not being completed by the Contractor. The project reports will be stored on CONNECT Construction.

6.3 Cost

Costs will be thoroughly tracked throughout the duration of the project. Various systems may be utilized to ensure appropriate expenditures of funds. Some of these systems include but are not limited to, HiCAMS and the NCDOT's financial software, SAP®.

The total project cost as estimated during the FHWA Major Project Cost Schedule Risk Assessment (CSRA) (October 2024) in year-of-expenditure (YOE) at the 70th percentile is \$1.812 billion. The costs of the individual elements making up this estimate are shown in Exhibit 7.

Exhibit 7: Project Cost Estimate (in millions, in YOE \$)

STIP Project	Item	70% from CSRA Model
I-5719A	Construction	\$ 540,420,351
	ROW Acquisition	\$ 50,500,000
	Utilities	\$ 38,954,851
	Engineering & CEI	\$ 52,682,727
	Reserve Funds	\$ 17,560,909
	Base Variability	\$ 11,404,171
	Market Conditions	\$ 70,357,462
	Risk Register	\$ 59,933,539
I-5719A TOTALS		\$ 841,814,010
I-5719B	Construction	\$ 393,757,165
	ROW Acquisition	\$ 23,800,000
	Utilities	\$ 56,962,987
	Engineering & CEI	\$ 38,416,882
	Reserve Funds	\$ 12,805,627
	Base Variability	\$ 9,419,763
	Market Conditions	\$ 58,114,756
	Risk Register	\$ 51,713,812
I-5719B TOTALS		\$ 644,990,991
I-5719C	Construction	\$ 195,610,340
	ROW Acquisition	\$ 3,500,000
	Utilities	\$ 5,552,619
	Engineering & CEI	\$ 17,440,387
	Reserve Funds	\$ 5,813,462
	Base Variability	\$ 4,865,066
	Market Conditions	\$ 30,014,782
	Risk Register	\$ 27,523,650
I-5719C TOTALS		\$ 290,320,307
P/E	P/E (expended)	\$ 20,891,437
	Remaining P/E (A&B)	\$ 3,067,501
	Rem. P/E and Fixed I-5719C	\$ 10,829,000
P/E TOTALS		\$ 34,787,938
PROJECT TOTALS		\$ 1,811,913,246

Since construction of this project is anticipated to exceed \$50 million, the Contractor will be required to submit an Anticipated Monthly Payout Schedule prior to beginning construction. The payout schedule is used by NCDOT to monitor the project's funding levels. The Payout Schedule will provide a monthly percentage breakdown of payouts based on the contract amount of anticipated completed work. The

Payout Schedule will cover the anticipated work from the date the Contractor plans to begin construction to the anticipated completion date. The Contractor is required to submit updates of the Payout Schedule on March 15, June 15, September 15, and December 15 of each calendar year until the project has been completed. The Contractor must submit the original Anticipated Monthly Payout Schedule and each quarterly update to the Resident Engineer and a copy to the State Construction Engineer.

The FHWA Major Project Financial Plan will be used to document, monitor, and update project cost estimates.

6.4 Project Schedule

The environmental planning and preliminary design phase for the I-5719 project began in September 2015, with the project purpose and need being established through a collaborative process. STIP projects I-5719 and U-5800 were combined into a single environmental document, Categorical Exclusion (CE), Type III, which was approved by the Federal Highway Administration (FHWA) on July 1, 2024. STIP Project U-6044 completed the NEPA process with a CE, Type II (B), in May 2024.

The CSRA Workshop was held August 28 to September 2, 2022, and focused on evaluating the widening portion of the project, which included U-5800. The CSRA was revisited and updated April 24 and April 25, 2024, this time including U-6044 since it will be let with I-5719 and U-5800, and again in October 2024, following phasing the project for construction, to reflect the most recent project and cost data.

The current NCDOT base project schedule for major project phases is shown in tabular form in Exhibit 8 and graphically in Exhibit 3 and is based on the latest known information. The anticipated completion date for I-5719 is September 2033.

Exhibit 8: Project Implementation Schedule

Milestone	Date
U-6044 CE Type II (B)	May 2024
I-5719 CE Type III Approval	July 2024
Cost and Schedule Risk Assessment - update	November 2024
Begin I-5719B ROW Acquisition	June 2025
Award I-5719B Design-Build Contract	June 2025
Begin I-5719C ROW Acquisition	November 2025
Award I-5719C CM/GC Contract	August 2026
Begin I-5719A ROW Acquisition	November 2028
Award I-5719A Design-Build Contract	November 2028

6.5 Risks

The CSRA noted several threats to the cost and schedule of the I-85 Widening Project. As the project progresses, the threats outlined in the CSRA Report (December 2024) should be controlled utilizing the processes outlined in Section 8 of this Project Management Plan. Construction delays will be minimized through contract methods and project management.

Additionally, all construction contracts associated with this project will require a contract bid bond and a contract performance bond in accordance with the 2024 NCDOT *Standard Specifications for Roads and Structures*. Contractors desiring to perform work on NCDOT projects must be prequalified by NCDOT.

6.6 Quality

Quality Assurance (QA) is defined as “All those planned and systematic actions necessary to provide confidence that a product or facility will perform satisfactorily in service.” (TRB Circular E-C037, April 2002).

The Contractor and the Construction Management Team are responsible for ensuring all activities are performed in a satisfactory manner and are consistent with contract requirements. QA includes all aspects of oversight ensuring that design, materials, workmanship, and construction operations provide a safe, durable, and quality facility for the traveling public. The NCDOT Division of Highways will have full control over problems that arise relating to QA/QC. However, the Construction Management Team will have critical roles during the QA Process.

Quality Assurance or Quality Acceptance (QA) - activities performed by the NCDOT to ensure the project is designed and constructed in accordance with the contract requirements. These activities are outlined in the *NCDOT Construction Manual* and the *NCDOT Materials & Tests Unit Materials Sampling Guide*.

Quality Control (QC) or Process Control (PC) - activities conducted by the Contractor to ensure the project is designed and constructed in accordance with the contract requirements. These activities are outlined in the *NCDOT Construction Manual* and the *NCDOT Materials & Tests Unit Materials Sampling Guide*.

Independent Assurance (IA) - an FHWA-required process that provides for separate or independent evaluations from the Contractor and Construction Management Team's QA/QC processes. The IA program will be performed in accordance with 23 CFR §637.207 Subpart B. The IA program does the following:

- Allows for evaluation of qualified sampling, testing personnel, and testing equipment;
- Covers sampling procedures, testing procedures, and testing equipment;
- Establishes a schedule based on either a project basis or a system basis;
- Includes a schedule of frequency for IA evaluation based on either a unit of production or a unit of time;
- Allows for evaluation by using one or more of the following: calibration checks, split samples, or proficiency samples;
- Allows for evaluation of testing personnel by observations and split samples or proficiency samples; and
- Allows for a prompt comparison and documentation of test results obtained by the tester being evaluated and the IA tester. The transportation agency shall develop guidelines, including tolerance limits for the comparison of test results.

As discussed in further detail within this section, the NCDOT Materials & Tests Unit will conduct the majority of the IA sampling and testing. These activities are outlined in the *NCDOT Construction Manual* and the *NCDOT Materials & Tests Unit's Materials Sampling Guide*.

The established NCDOT Technician Certification programs will be utilized, including ABC Sampling, Borrow Pit Sampling, Coating Inspection, Conventional Density, Welding, Portland Cement Sampling and Testing, Aggregate Sampling and Testing, and Nuclear Density Testing certification. Similar certifications established through the American Concrete Institute (ACI) will be required to ensure the technicians performing quality assurance testing are qualified.

The NCDOT QA procedures as outlined in the *NCDOT Construction Manual, 2024 NCDOT Standard Specifications for Roads and Structures* and other NCDOT manuals such as the *Hot Mix Asphalt Quality Management System Manual* will be followed.

Sampling and testing of materials will be in accordance with established procedures and at the frequencies established in the *NCDOT Minimum Sampling Guide*. This guide and associated guidance can be found on the web at <https://connect.ncdot.gov/resources/Materials/Pages/default.aspx>. Additional documents that outline testing and documentation requirements that will be utilized include the *2024 NCDOT Standard Specifications for Roads and Structures* and the *NCDOT Construction Manual*.

The Materials & Tests Unit will perform IA activities. Additionally, the Materials & Tests Unit's vast network of technicians will be utilized to perform materials evaluation, testing and acceptance of materials fabricated at manufacturing or precast facilities. They will work closely with the Division, contractor, and pre-cast suppliers to mitigate any concerns over cracked panels and piles.

As noted in Section 5.2, NCDOT will hire a PEF, independent of any CM/GC or DB team, to perform CEI services. The CEI firm will be fully qualified with appropriate professional engineering oversight and the appropriate certifications of technician-level employees. Fully qualified in this context means that CEI employees will have the appropriate levels of education and experience for each role that they fill, and appropriate certifications are held and are up to date. Qualified CEI employees will have adequate levels of experience in each individual area of work to ensure that the work is performed in accordance with the specifications, contract details, and good engineering practice. The CEI firm will perform QA functions and certify that all work is in accordance with the plans and contract requirements.

6.6.1 Control of Non-Conforming Products

Proper QA/QC testing assures that materials and products incorporated into the work conform to requirements. At times, test results indicate that the material does not conform to requirements. Project personnel can accept materials and products that deviate from the requirements by a minor amount as being within "reasonably close conformity." The definition of "reasonably close conformity" is failing test results that vary from the specified requirement that are insignificant or within a reasonable level of variance so as not to affect the performance of the material or product.

Failing test results that exceed this definition of reasonably close conformity will be investigated thoroughly. The results of the investigation will be discussed with the Resident Engineer. Repercussions for failing tests of any significant magnitude will include price reductions, and possibly removal and replacement of constructed materials. If the Contractor is in production mode and test results are inadequate, the Contractor will cease production until corrective measures can be taken.

When there are failing test reports, the Resident Engineer will investigate and note the following information for each test report:

- The results of any check samples taken at the same location;
- Any justification and/or explanation of why the acceptance sample failed to meet the requirements of the *Standard Specifications*;
- Whether the material represented by the test was utilized or removed and replaced;
- If the material was utilized, whether a price reduction was made;
- Other information that the Resident Engineer deems important that pertains to the test report; and
- The Resident Engineers' communication in writing with the Division Engineer regarding the failure, recommendations, etc.

The Division Engineer will render a decision on the outcome of the issue. FHWA will receive a copy of all related correspondence and be consulted prior to a decision, as appropriate. These procedures are contained in the *NCDOT Construction Manual* in the Record's and Reports Section.

7. Project Communications Management

Key internal stakeholders include all members of the Project Team, NCDOT and FHWA staff and key consultant engineers. The STIP No. I-5719, U-5800, & U-6044 Division 12 Construction Engineer Rodney Gantt has been designated as the point of contact for communications between NCDOT and the Contractor.

Key external stakeholders include FHWA, NC Historic Preservation Office (NC HPO), US Fish and Wildlife Service (USFWS), US Army Corps of Engineers (USACE), NC Department of Water Resources (NCDWR), Gaston County, and the municipalities of Gastonia, Lowell, Belmont, and Mt. Holly.

To streamline communications and reduce redundancy, the Construction Management Team has designated the Division 12 Construction Engineer as the point of contact (POC) for communications with other members of the Project Management Team. Most communication between NCDOT and its consultants will be informal through phone, email, and face-to-face interaction. There will be a more formal communication process for items and communications that are time sensitive. Dispute Resolution procedures are set forth in the Project Special Provisions of the highway construction contract.

7.1 Strategic Communication

Communication efforts for the I-85 Widening Project are ongoing with key stakeholders. Sharing construction phasing activities along with timelines of the Project phases are critical to the success of the project. Consistent stakeholder communication will be implemented through the following activities, as appropriate:

- Identify specific stakeholders and partners for contacting the parties;
- Provide opportunities for small group meetings with identified stakeholders. The meetings may include a brief, targeted presentation tailored to the identified concerns of the group and provide an opportunity for questions and answers;
- Update and maintain a comprehensive project website, <https://www.ncdot.gov/projects/i-85-widening-gaston-county/Pages/default.aspx>;
- Issue news releases, as needed, topics may include project schedule, progress, impacts, and milestones;
- Provide notification information to identified stakeholders;
- Coordinate strategic social media campaigns.
 - Collaborate with project field personnel to document the progress of the project by posting photos to the Department's Instagram, Pinterest, and Flickr accounts. Links to the photos will be posted on Twitter and Facebook and used in news releases.

7.2 Quarterly "All-Hands" Project Status and Budget Meeting

The agency will conduct an internal project status and budget meeting approximately every quarter. Invitees will include representatives from the following agencies and organizations as well as others, as appropriate:

- FHWA
- NCDOT
- NC Historic Preservation Office
- US Army Corps of Engineers
- NC Division of Water Resources

- Engineering Consultants

The agenda will include status updates on the following topics:

- Construction progress
- Maintenance of Traffic coordination

8. Project Documentation and Reporting

The procedures for project documentation and control will be in accordance with the *NCDOT Construction Manual, as approved by FHWA*. Both electronic and physical records will be utilized in this project, and appropriate measures will be taken to ensure they are secured and retained for the required durations. Pre-construction documentation will primarily be electronic. These records will be secured using encryption, access controls, and regular backups. Both construction and post-construction documentation will be a combination of electronic and physical formats. Physical documents may be scanned and stored electronically, but the original source documents will be retained. Certain modifications may be made to meet the financial needs of the project, the relationship between NCDOT and other stakeholders, and any other related activities.

8.1 Day to Day Project Documentation

A private engineering firm (PEF) will be hired by the NCDOT to perform Construction Engineering and Inspection (CEI) services, including documentation required by the *NCDOT Construction Manual*.

Other components of the project documentation process include:

- Material control and documentation using HiCAMS and CONNECT (SharePoint);
- Uniform filing system, in accordance with the *NCDOT Construction Manual*;
- Special reports and audits as required by the financial plan and the contractor payment process;
- Documentation of Disadvantaged Business Enterprise (DBE) utilization through the NCDOT DBE Tracking System and
- In-depth audits from an engineering control perspective and a financial perspective.

8.2 Computer Aided Drafting and Design Standards

All project design files will be computer automated, developed, and submitted utilizing Computer Aided Drafting and Design (CADD) systems and standards in accordance with the latest NCDOT CADD guidelines and conventions.

9. Project Closeout

9.1 Substantial Completion

The conditions that the Contractor will need to satisfy to achieve Substantial Completion are listed in the contract. The Contractor will provide a written notification to inform NCDOT of the date of Substantial Completion not less than 20 days prior to the date that the Contractor expects to achieve Substantial Completion.

At the receipt of such a written notice, NCDOT will evaluate whether Substantial Completion is achieved by conducting an inspection of the Project and its components. NCDOT will prepare a written assessment to determine whether the Contractor has achieved Substantial Completion. NCDOT will issue a Substantial

Completion certificate or a written notification of why the Contractor has not achieved Substantial Completion.

9.2 Punch List

Procedures and schedules will be established to prepare and complete Punch List work. Punch List preparation will be consistent and coordinated with the inspections necessary for the issuance of the Substantial Completion certificate and accomplishing Final Acceptance. Punch List work will be completed by the Final Acceptance Deadline.

9.3 Project Closeout Plan

Due to the high volume of the project work, both progressive and phased consolidation of closeout documentation is required in conjunction with the individual phase durations. Phased closeout documentation will allow the NCDOT to conduct final inspections by section, contract, or as portions of the work are completed.

The Resident Engineer is required to provide as-built plans, final quantities, and specified records, which may include a variety of other documents, in accordance with established processes or as amended.

Project closeout activities shall be initiated as soon as reasonably possible. The as-built plans, as required for closeout, shall be up to date throughout the construction process. Any requests for additional compensations or extensions of contract time shall be handled promptly and efficiently at the time of occurrence. Final closeout shall occur no later than 120 days following final full acceptance of a contract.

As project contracts near completion, final inspections will be held in accordance with standards established by the NCDOT. NCDOT will perform all final inspections with assistance from the CEI firm and FHWA.

9.4 Project Closeout

Final Acceptance must be achieved before the Project Closeout process can be initiated. During the Final Acceptance process, there will be no outstanding claims, unfinished work, or other contract administration issues. Once all the required documentation and source records including project inspector diaries, inspection reports, materials testing results, as-built plans, and project management paperwork is verified, NCDOT will issue a certificate of Final Acceptance.

9.5 Warranty Phase

The procedures ensure that warranties are in force as required by the contract and work performed under the warranty complies with contract specifications.

9.5.1 Warranty Responsibility

The Contractor will perform warranty work as required by the contract, and the Resident Engineer or others will perform QA of work performed under the warranty to ensure compliance.

9.5.2 Warranty Process Procedures

One month prior to the forecasted substantial completion date for any of the project's component projects, the Resident Engineer will notify the Contractor in writing of the contract requirements for any warranty submittals. The Resident Engineer will review the contract specifications and prepare a list of required warranties to monitor the Contractor's compliance with the warranty submittal provisions.

The Contractor will submit warranties within the time specified by the contract and prior to issuance of the final payments. NCDOT will verify that all letters of certification and appropriate test reports for the items under warranty required, either during the submittal or field installation process, were provided by the contract project team.

If, during the warranty period, which is initiated with the date of substantial completion, any work is found to be defective or not in accordance with the contract requirements, the Resident Engineer will notify the contract project team in writing of their responsibility to perform corrective work in accordance with the contract provisions.

In the event the Contractor is in non-compliance with the contract requirements to perform warranty work, the Resident Engineer will arrange for the work to be performed by others. The Resident Engineer will arrange for the cost reimbursement by the responsible Contractor through a deductive contract modification or by placing a demand on the warranty bond surety.

Maintenance of the project will remain the Contractor's responsibility until NCDOT's final acceptance of the project.

10. Project Oversight

As stated in Section 5.1, the Senior Leadership Team will provide overall management for the I-85 Widening Project and act as the final authority on major decisions. The Senior Leadership Team is led by the NCDOT Division Engineer in Division 12 and the Division Administrator for FHWA-NC. FHWA-NC will provide a Transportation Engineer who will serve as the Agency's POC for project oversight concerning the status of the project, review and acceptance of FHWA required submissions, and provide status reports to FHWA Headquarters. The FHWA-NC Transportation Engineer will use FHWA resources, as required, from the FHWA North Carolina Division Office. The Transportation Engineer will be informed of project related concerns through weekly meetings, correspondences, and other project communication mechanisms. Unless the FHWA/NCDOT Stewardship and Oversight Agreement is revised to delegate specific activities to NCDOT, FHWA will have full oversight on the I-5719C phase due to the CM/GC contract.

11. Management of Project Management Plan

This Project Management Plan (PMP) will be updated as appropriate throughout the life of the project. The purpose of updates is to ensure that the documented project procedures, processes, and roles are current. PMP updates with significant changes to the project will be submitted to FHWA for review and approval. All other PMP updates will be submitted to FHWA for recordkeeping purposes.

The Division 12 Construction Engineer or designees will review the PMP on an annual basis. The review will include a comprehensive review of this document and the schedule for the I-85 Widening Project. Changes in the schedule, funding, risks, or costs will be documented, and a revised PMP will be distributed to the Senior Leadership Team.

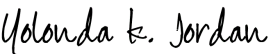
APPENDIX A: EXECUTIVE LEADERSHIP ENDORSEMENT

Acceptance and Adoption of the I-85 Widening Project (STIP Project Nos. I-5719, U-5800, and U-6044) Project Management Plan

The North Carolina Department of Transportation has developed a Project Management Plan for the I-85 Widening Project in Gaston County to comply with the requirements of 23 USC §106, and the Project Management Plan Guidance issued by the Federal Highway Administration. The plan provides documented procedures and processes to manage the project and the roles of the project management team.

This endorsement officially initiates the use of the procedures and requirements as set forth in the Project Management Plan for the I-85 Widening Project.

The effectiveness of the Project Management Plan will be continuously evaluated. Revisions will be issued as the project progresses to generate the most effectively managed project and to meet the project objectives and goals.

Signed by:

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Date: 1/16/2025

Yolanda K. Jordan, Division Administrator
Federal Highway Administration – North Carolina Division

Signed by:

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Date: 1/16/2025

Mark Stafford, PE
Division 12 Engineer, Division of Highways
North Carolina Department of Transportation

APPENDIX B: PROJECT MANAGEMENT CHECKLIST

PROJECT MANAGEMENT PLAN CHECKLIST

I-85 Widening Project, (NCDOT TIP Projects I-5719, U-5800, & U-6044)

Project Name: _____

1. Project Purpose, Goals, Objectives, and Metrics

- Describe project purpose, i.e. rationale for the project that is consistent with NEPA Purpose and Need statement
- Identify project goals, i.e. long term vision for the project
- Describe project objectives, i.e. specific, measurable, short term actions that outline the “who, what, when, where, and how” of a project
- Outline project metrics, i.e. project targets and tracking requirements

2. Project Description

- Narrative description of project scope
- Map
- Date of NEPA Decision Document(s) (month/year)
- Document Operationally Independent and Non-Concurrent Construction (OINCC) determinations, if applicable
- If phasing plan is presented, include detailed description of the project phases

3. Project Procurement

- Describe how the Project Sponsor will or has acquired services such as environmental studies, design and construction
- Summarize how procurement decisions are to be made including selection of consultants and /or contractors and contracting and delivery methods to be utilized

4. Project Organizational Management

- Outline the organization structure for the project and define the roles and responsibilities of the project team
- Graphical representation of the organization such as organizational chart

5. Project Management Controls (Contract Administration, Scope, Cost, Schedule, Risks, and Quality)

- Describe project management controls
- Document how and when project performance is reported
- Address the following subsections
 - Contract Administration. Discuss how the Project Sponsor will document, monitor and control contract administration activities for the project, including change management and claims management process
 - Scope. Document the processes for defining, tracking, and controlling overall project scope
 - Cost. Outline how the Project Sponsor will document, monitor, and control project cost
 - Schedule. Document processes and tools used for tracking schedule, identifying scheduled deviations, and addressing schedule issues
 - Risk. Discuss how the Project Sponsor will document, monitor, and control project risks
 - Quality. Discuss how the Project Sponsor will document monitor and control all aspects of project quality throughout the life of the project

6. Project Communications Management

- Address processes and procedures to ensure effective communications between project team members and stakeholders
- Outline how informal and formal communications will be conducted and managed

7. Project Documentation & Reporting

- Describe how project records will be managed
- Discuss how lessons learned will be tracked throughout the life of the project and the final documentation of all lessons learned

8. Project Closeout

- Outline the processes and procedures for contract closeout plan.
- Discuss the requirements for a coordinated transition from the construction phase to the operations and maintenance phase

9. Project Oversight

- Describe the oversight roles and responsibilities of both the Project Sponsor(s) and FHWA
- Reference to previously developed FHWA/State DOT Oversight Agreements, if applicable

10. Management of the Project Management Plan

- Outline the processes and procedures for maintaining and updating the project management plan
- Identify team members responsible for managing the project

11. Other Possible Sections

- Include other sections/topics for aspects of the project that pose a significant risk and/or require processes and procedures that are unique to the project

Executive Leadership Endorsement

Reviewed by: Signed by:
Dale Privette
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Reviewed by: Signed by:
Matthew Seymour
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APPENDIX C: I-5719C CM/GC PROCUREMENT

CM/GC TIMELINE

**I-5719C
Gaston County**

October 1, 2024

Advertisement	October 1, 2024
LOI Due	October 29, 2024*
Shortlist Notification	November 12, 2024
RFQ Issued	November 12, 2024
Question and Answer Sessions	November 19, 2024
SOQ and CM/GC Fixed Price Markup Percentage Form Submission	December 17, 2024*
Team Interviews (at the discretion of the Department)	January 14, 2025
CM/GC Selection and Notification for Preconstruction Contract	January 16, 2025
Anticipated NTP	January 30, 2025

Note: All dates are approximate and subject to change without notice.

***Due by 4:00 PM Eastern**

Advertised: **October 1, 2024**

NCDOT

REQUEST for LETTERS of INTEREST (RFLOI)

CONSTRUCTION MANAGER / GENERAL CONTRACTOR

TIP I-5719C

Addendum No. 1 - October 2, 2024

Addendum No. 2 – October 14, 2024

TITLE: Construction Manager / General Contractor

USING AGENCY: North Carolina Department of Transportation

ISSUE DATE: **October 1, 2024**

SUBMITTAL DEADLINE: **October 29, 2024**

ISSUING AGENCY: North Carolina Department of Transportation
Alternative Delivery Unit

DIVISION: 12

SYNOPSIS

Hereinafter, the term “Contractor” or “CM/GC” refers collectively to either a singular contractor, a joint venture made up of more than one contractor, or a team with a prime contractor and subcontractors.

The North Carolina Department of Transportation (NCDOT or the Department) desires to obtain a **Construction Manager / General Contractor (CM/GC)** as part of the delivery of a multi-disciplined project which includes roadway and railway bridge construction along I-85 in Gaston County. The Department will provide the project design and inspection team to work with the Contractor during the preconstruction and construction phases.

Design and inspection services are not included in this advertisement.

CONSTRUCTION MANAGER / GENERAL CONTRACTOR (CM/GC) PROJECT DELIVERY METHOD

The Construction Manager / General Contractor (CM/GC) project delivery method allows the use of a construction manager during the design process to provide input on the design. During the design phase, the construction manager provides advice, including constructability review, scheduling, pricing, risk analysis, and phasing, to assist in designing a more efficient and well-designed project. The construction manager may subsequently act as the general contractor and construct the project if the department and the Construction Manager / General Contractor reach agreement on a price for construction.

The Construction Manager / General Contractor is selected based on qualifications and demonstrated competency. The CM/GC process consists of a two-phased contracting approach where the contractor, acting as construction manager (CM), provides services during planning, design, and estimating of the

Addendum No. 2, October 14, 2024

project. During the preconstruction phase of the project, the contractor works as part of an integrated team with the Department and its design team providing constructability support, input regarding scheduling and phasing, and other input that helps the owner design a more constructible project. The contractor will prepare incremental cost estimates in conjunction with design refinement; ultimately resulting in developing the schedule, scope, and cost to construct the project. During this phase, the contractor works under an agreement much like a design consultant and is paid for their services.

Potential benefits of the CM/GC method include but are not necessarily limited to saving project costs, lowering operational costs and / or project lifecycle costs, improving constructability, enhancing innovation, reducing risk, expediting project delivery by contracting with the CM/GC contractor early in the design process and negotiating price and schedule for construction before all design is complete, being able to begin construction on portions of the project before all design for the project is complete, and shortening construction schedules.

For the CM/GC selection process NCDOT procures professional services on a qualifications, experience, and expertise basis from the selected CM/GC contractor early in the design phase to offer suggestions on innovations, cost and schedule savings, and constructability issues. Upon shortlist, the CM/GC's will submit a CM/GC fixed-markup percentage in a separate, sealed envelope. Proposers shall state their proposed CM/GC fixed-markup percentage, identified as a percentage, and carried out to two (2) decimal points (e.g., 0.00%). The CM/GC fixed-markup will be included in the negotiated lump sum and unit-based bid prices to make up the Construction Agreed Price (CAP) provided the service contract's Construction Phase option is exercised.

Upon completion of the design, or individual design packages, the CM/GC contractor and NCDOT negotiate an agreed upon price for the construction, and then the CM/GC contractor acts as a general contractor to complete construction. If an acceptable CAP cannot be reached, the project will be advertised centrally following the Department's normal competitive bidding process, Design Bid-Build, and open to all contractors to submit a bid. The Preconstruction Phase Service contract with the CM/GC contractor will not be extended into the Construction Phase but the Department has the right to obtain and use the CM/GC's technical information developed during its preconstruction service. The CM/GC is excluded from bidding on this construction project.

This solicitation is part of a two-step process in selecting a qualified Construction Contractor for the construction management portion of the project. Successful responders to this RFLOI may be shortlisted and provided with an opportunity to submit a Statement of Qualification (SOQ) as part of a subsequent Request for Qualification (RFQ) solicitation. While CM/GC is specifically intended to provide contractors and the Department greater collaboration during the design and constructability of the project, successful responders must also demonstrate the ability to construct all components of the project.

PROJECT DESCRIPTION

NCDOT proposes to use the Construction Manager / General Contractor (CM/GC) selection process, and then enter into a CM/GC contract with the selected construction contractor. The project includes but is not limited to preconstruction and, if a negotiated CAP is agreed to, construction services, environmental and quality management, safety, contract administration and all necessary support services.

The project, I-5719C, is located along I-85 in Gaston County and includes replacing several railway bridges and a roadway bridge, the demolition and removal of existing bridges, secondary roadway work and utility relocation. The contractor will also be responsible for construction at the Gastonia Rail Yard, Norfolk Southern Rail Line west of Groves Street and Norfolk Southern Rail Line east of Ozark Avenue

which includes phasing track work. This work shall include, but is not limited to roadbed, sub-ballast, and track construction. Construction at the Piedmont & Northern (P&N) Mainline Bridge shall include the cutovers, roadbed, sub-ballast, and track construction.

The bridges to be replaced are as follows:

Temporary bridge for Bridge No. 350129 on Piedmont & Northern (P&N) (MP SFC 21.55) west of East Ozark Avenue

- Bridge No. 350129 on P&N (MP SFC 21.55) west of East Ozark Avenue
- Bridge No. 350132 on Norfolk Southern (NS) (MP Mainline 397.73) east of East Ozark Avenue
- Bridge No. 350138 on NS (MP Mainline 393.72) west of Groves Street
- Bridge No. 350142 on SR 2213 (Groves Street)

SCOPE OF WORK

The North Carolina Department of Transportation (NCDOT) is soliciting proposals for the services of a contractor/team for the following contract scope of work:

As described previously, this RFLOI is part of a two-step process used to procure a CM/GC contractor for the preconstruction portion of the subject project. Responses to this RFLOI will be screened, and successful responders will be shortlisted and provided with an opportunity to submit a Statement of Qualifications, SOQ, to a subsequent Request for Qualifications, RFQ, solicitation. The Contractor that is ultimately selected from the RFQ will be awarded a contract to provide services for the preconstruction portion of the CM/GC project. These services may include but not limited to the following:

(1) Constructability Review - The CM/GC will be required to become an integrated part of the design team and provide input and feedback relating to constructability of the project as well as provide innovation to create greater value for the Department. The CM/GC will also be expected to provide input for utility relocation, rail coordination and construction, maintenance of traffic, and bridge construction.

(2) Risk Analysis - The CM/GC will be required to participate in regular risk reviews and multiple risk management workshops designed to identify and quantify risks associated with the project.

(3) Cost Estimating - The CM/GC will be required to prepare estimates at various intervals throughout the preconstruction phase of the project. These estimates will be compared to others prepared by the Department and / or an independent cost estimator. The CM/GC must be prepared to engage in an "open book" discussion of the various components that make up its own opinion of cost.

(4) Scheduling - The CM/GC will be required to prepare construction schedules with each Opinion of Probable Construction Cost (OPCC) submittal that demonstrates the CM/GC can deliver key work components within the needed deliverable timeframe.

The CM/GC will be required to be available for virtual and / or in-person meetings, office or on site, through the duration of the preconstruction phase. The goal of the preconstruction portion of the project is for the Department and CM/GC contractor to arrive at a mutually agreeable Opinion of Probable Construction Cost (OPCC) and schedule, and to proceed with construction of the project.

The following describe the key components of work that make up the scope of the project:

- Provide construction cost estimates to be utilized for project budgeting and programming purposes.
- Assist in identifying constructability issues with an emphasis on railway design.
- Identify construction impacts and constraints related to rail and roadway bridge construction.

Bonding Capacity - The successful CM/GC contractor must demonstrate the ability to provide construction bonding for up to \$233 million for this project.

See NCDOT Guidelines for Awarding Construction Manager / General Contractor Projects, a sample preconstruction contract and additional information under Provided Material located on the website or can be accessed via the Alternative Delivery website.

PROPOSED CONTRACT TIME

The anticipated duration of the completed contract is expected to be up to 6 years, including preconstruction and construction activities.

PROPOSED CONTRACT PAYMENT TYPE

Preconstruction – Payment is anticipated to be in a technical / professional services contract for the duration of the preconstruction phase.

Construction Phase – Negotiation of Construction Cost Proposals including a Construction Agreed Price (CAP).

SUBMITTAL/SUBMISSION REQUIREMENTS

All Letter of Interests (LOI) are limited to ten (10) pages inclusive of the cover sheet and shall be on 8-1/2" x 11" sheets, single-spaced, one-sided. Graphs and charts may be on 11" x 17".

ONLY ELECTRONIC LOIs WILL BE ACCEPTED.

LOIs should be submitted in .pdf format using software such as Adobe, CutePDF, PDF Writer, DocuDesk deskPDF, etc.

One copy of the LOI should be sent as a .pdf file, to the Alternative Delivery email address (altdelivery@ncdot.gov). A confirmation email will be sent as an electronic receipt when your LOI is received at the Alternative Delivery email address. Paper copies are not required. The subject line should contain the Contractor's Name, and "LOI for CM/GC Services – Division 12 – I-5719C".

In addition, all questions regarding this LOI should be sent to the Alternative Delivery email address (altdelivery@ncdot.gov).

LOIs SHALL be received electronically no later than 4:00 P.M., October 29, 2024. LOIs received after this deadline will not be considered.

The Department reserves the right to reject all LOIs and not proceed with procurement.

SELECTION PROCESS

Following is a general description of the selection process:

- The NCDOT Selection Committee will review all qualifying LOI submittals.
- The NCDOT Selection Committee MAY, at the Department's discretion, shortlist between two to five to provide a Statement of Qualifications (SOQ).

PREQUALIFICATION

The CM/GC will not be required to be prequalified to provide responses to the RFLOI. If shortlisted, the CM/GC will be required to be prequalified in order to submit responses to the Request for Qualifications (RFQ).

The Proposer shall provide the services of a contractor prequalified for rail work by the NCDOT Rail Division. Prequalified disciplines and discipline codes required include, but are not limited to, the following:

- 5010 Track Construction
- 5050 Track Maintenance/Rehabilitation
- 5080 At-Grade Crossing Surfaces
- 5090 Railroad Corridor Prime Contractor

SELECTION CRITERIA

In selecting a contractor / team, the selection committee will take into consideration qualification information including such factors as:

1. 40% = Experience completing complex projects within or prior to contractual timeframes with an emphasis on successful Railway and Roadway Bridge Projects.
2. 30% = Bridge Construction, provide other successful Railway and Roadway Bridge replacements.
3. 20% = Maintenance of Traffic, Railway, Roadway and Utility Relocation.
4. 10% = Understanding of alternative delivery methods in either private or public projects.

ORGANIZATION AND INFORMATION REQUIREMENTS

The LOI must be addressed to Mr. Malcolm Watson, PE; Alternative Delivery Assistant Manager and must include the name, address, telephone number, and email address of the prime contact person for this RFLOI.

The LOI must also include the information outlined below:

Chapter 1 - Introduction

The Introduction should demonstrate the contractor's overall qualifications to fulfill the requirements of the scope of work and must contain the following elements of

information:

- Expression of contractor's interest in the work.
- Summation of information contained in the letter of interest.
- Briefly describe contractor's experience with CM/GC, Design-Build, or Progressive Design-Build.
- Briefly describe the contractor's significant Railway and Roadway Bridge Construction Experience, Utility Relocation, and Maintenance of Traffic on high-volume facilities.

Chapter 2 - Team Qualifications

This chapter should elaborate on the general information presented in the introduction, to establish the credentials and experience of the contractor to undertake this type of effort.

The following must be included:

Identify recent, similar projects the contractor, acting as the prime contractor, has conducted which demonstrates its ability to conduct and manage the project. Provide a synopsis for each project, and include the date completed and contact person.

Chapter 3 - Team Experience

The submittal shall clearly indicate the Contractor's available resources to work on the preconstruction and construction phases of the project. The Contractor shall provide an estimate of the percentage of work in the construction phase that will be self-performed and for the work to be subcontracted provide a list of anticipated types of work. Project Manager, other key Team Members and their qualifications for the proposed work. Specifically, the Department is interested in the experience, expertise, and total quality of the contractor's proposed team. Also, include the team's organization chart for the Project / Plan. A Capacity Chart / Graph (available work force) should also be included. Any other pertinent information should also be listed in this section.

Note: If a project team encounters personnel changes, or any other changes of significance dealing with the company, NCDOT should be notified immediately.

Chapter 4 - Technical Approach

The contractor shall provide information on its approach to accomplish the design support and its approach to the means and methods for roadway and rail bridge construction activities and any geotechnical issues that needed to be overcome, maintenance of traffic, and any innovative ideas / approaches to complete these activities.

SUBMISSION SCHEDULE AND KEY DATES

RFLOI Release – October 1, 2024

Deadline for LOI Submission – October 29, 2024

Shortlist Announced * - November 12, 2024

* Notification will ONLY be sent to shortlisted contractors.

FHWA Approval

Division Administrator

Signature: _____

Date: _____

NCDOT Approval

Chief Engineer

Signature: _____

Date: _____

APPENDIX D: I-5719B DB PROCUREMENT

I-5719B / U-5800 Design-Build Procurement Timeline

I-85 Widening - From NC 7 (McAdenville Road - Exit 23) to east of NC 273 (Beatty Drive - Exit 27), Widen to eight lanes. Includes U-5800 - Intersection improvements - NC 7 (Main St.) and US 29 / 74 (Wilkerson Blvd.) in Belmont in Gaston County

October 16, 2024

RFQ Advertisement	September 3, 2024
Statement of Qualifications due from Design-Build Teams	October 1, 2024
Department Announces Short-listed Teams	October 16, 2024
Department Issues First Industry Draft RFP to Short-listed Teams	October 18, 2024
Department Holds Statement of Qualifications Debriefs	Week of November 11th
Department Posts Responses to Non-Confidential Questions	November 20, 2024
First Meeting with Short-listed Teams	December 3, 2024
Department Issues Second Industry Draft RFP to Short-listed Teams	January 7, 2025
Department Posts Responses to Non-Confidential Questions	February 4, 2025
Second Meeting with Short-listed Teams	February 11, 2025
Department Issues Final RFP to Short-listed Teams	March 5, 2025
Technical Proposals Due	May 28, 2025
Sealed Price Proposals Due	June 5, 2025
Technical Presentations by Short-listed Teams	June 11, 2025
Open Price Proposals	June 17, 2025
Department Holds Technical Proposal Debriefs (Pending Contract Execution)	Week of July 21, 2025

NOTE: All dates are approximate and subject to change without notice.