



# Gaston County

Gaston County  
Board of Commissioners  
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## Office of Capital Improvements (OCI)

### Board Action

File #: 25-280

Commissioners Fraley & Hovis - Office of Capital Improvements - To Authorize the County Manager, or his Designee, to Execute an Agreement Between the North Carolina Department of Transportation (NCDOT) and Gaston County for the I-85 Widening Project (TIP No. I-5719B / U-5800)

#### STAFF CONTACT

Ray Maxwell, PE - Executive Director of Capital Projects - 704-862-7551

#### BUDGET IMPACT

N/A

#### BUDGET ORDINANCE IMPACT

N/A

#### BACKGROUND

The North Carolina Department of Transportation (NCDOT) is undertaking significant improvements along Interstate 85 (I-85) in Gaston County by widening approximately ten (10) miles of I-85 from six (6) to eight (8) lanes from U.S.321 (Exit 17) in Gastonia to N.C. 273 (Exit 27) in Belmont/Mount Holly. Due to the varied and complex nature of delivering the project, NCDOT has chosen to deliver its construction in phases.

Project Phase I-5719B / U-5800 Design-Build Project adds extra lanes (from 6 to 8 lanes) to I-85, replace roadway bridges, railroad bridges, and reconstruct interchanges from NC 7 (McAdenville Road/Main Street - Exit 23) to east of NC 273 (Beatty Drive/Park Street - Exit 27), including U-5800 - Intersection improvements at NC 7 (Main St.) and US 29/74 (Wilkinson Blvd.) in Belmont, including a P&N Belmont Spur bridge, reconstruct 0.7 miles of railway, and rehabilitate the NC 273 bridge.

(Continued on Page 2)

DO NOT TYPE BELOW THIS LINE

I, Donna S. Buff, Clerk to the County Commission, do hereby certify that the above is a true and correct copy of action taken by the Board of Commissioners as follows:

NO.	DATE	M1	M2	JBailey	CBrown	CCloninger	AFraley	BHovis	TKeigher	SShehan	Vote
2025-176	05/27/2025	TK	JB	A	A	A	A	A	A	A	U

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A=AYE, N=NAY, AB=ABSENT, ABS=ABSTAIN, U=UNANIMOUS

Commissioners Fraley & Hovis - Office of Capital Improvements - To Authorize the County Manager, or his Designee, to Execute an Agreement Between the North Carolina Department of Transportation (NCDOT) and Gaston County for the I-85 Widening Project (TIP No. I-5719B / U-5800)  
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In recent years, NCDOT and the Gaston Cleveland Lincoln Metropolitan Planning Organization (GCLMPO) have worked closely with local governments, including Gaston County, and the cities of Gastonia, McAdenville, Lowell, Belmont, and Mount Holly, as well as other regional stakeholders to ensure consistent enhancements across the project scope. As a part of this collaboration, a survey was sent to the Board of County Commissioners and elected officials of municipalities along the project alignment to gather feedback and confirm that the project is in line with the priorities and concerns of local leaders. By engaging early participation by the Board of County Commissioners, NCDOT was able to incorporate feedback for the type of aesthetic improvements needed for this project. From feedback received, NCDOT prepared agreements for mid-level enhancements at interchanges and landmark improvements at Exit 27 due to its location as the entrance/gateway to Gaston County. The purpose of this Agreement is to outline the participation in project costs, delivery, and/or maintenance by Gaston County for Additional Work (betterments), as detailed further in the Agreement (Exhibit A).

The overpass improvements for this project include several aesthetic and structural enhancements, such as brick veneer on the vertical abutments, unstained concrete on various parts of the bridge including the non-traffic face of the railing, vertical face of the deck overhang, bent caps, exterior face and bottom of concrete girders, columns and wingwalls, and other landscaping and landmark improvements.

A total of \$1,010,409.62 funds were budgeted in FY25 to cover the anticipated costs, and Parks, Recreation and Tourism is prepared to contribute \$165,000 from reserve funds toward these aesthetic enhancements. Since funds were previously budgeted, no additional appropriations are necessary as a result of this Board Action. Approval of this Board Action authorizes the County Attorney to finalize the necessary contract documents for the work and authorizes the County Manager, or his designee, to execute said contracts on behalf of Gaston County.

NCDOT is requesting this agreement to be approved by the end of May 2025.

**POLICY IMPACT**

N/A

**ATTACHMENTS**

DRAFT NCDOT-Gaston County Agreement - TIP Number I-5719B/U-5800; DRAFT Aesthetics Scope of Work

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**AGREEMENT OVERVIEW**

NORTH CAROLINA  
GASTON COUNTY

**PARTIES TO THE AGREEMENT:**

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

AND

GASTON COUNTY

**DATE:** *date approved*

**PROJECT NUMBERS**

TIP NUMBER: I-5719B / U-5800  
WBS ELEMENT (PE):  
WBS ELEMENT (ROW):  
WBS ELEMENT (CON): 50135.

**The purpose of this Agreement is to identify the participation in project costs, project delivery and/or maintenance, by the other party to this Agreement, as further defined in this Agreement.**

**SCOPE OF TIP Project ("Project"):** I-5719B - I-85 widening from west of NC 7 (McAdenville Road / Main Street – Exit 23) to east of NC 273 (Beatty Drive / Park Street - Exit 27) and includes U-5800 - Intersection improvements - NC 7 (Main St.) and US 29 / 74 (Wilkerson Blvd.) in Belmont.

**ADDITIONAL WORK:** Project Betterments (Overpass and Interchange Improvements, and Overpass and Interchange Landscaping).

- A. Overpass Improvements at SR 2000 (Hickory Grove Road), include the following:
1. Vertical abutment, turned-back retaining walls or parallel wing walls shall have brick veneer.
  2. Non-traffic face of concrete bridge railing, vertical face of deck overhang, and bent caps shall unstained concrete.
  3. Exterior face and bottom of exterior concrete girders, columns, and wingwalls (or earwalls where MSE abutments are used) shall be unstained concrete.
  4. Medallions on the ends of bent caps.
  5. Street name on each side of the bridge.
  6. Black coated bridge rail.
- B. Interchange Improvements – Existing Structure at NC 273 (Beatty Drive) (Exit 27), include the following:
1. Pressure washing existing concrete bridge components (Rails, Parapet, Overhang, Bent Caps, Columns, Barriers and Wingwalls.
  2. Removal of the existing 3-Bar bridge rail and install black coated 3-Bar bridge rail.
- C. Overpass Landscaping at SR 2000 (Hickory Grove Road) - (Enhanced),
- D. Interchange Landscaping at NC 273 (Beatty Drive) (Exit 27) - (Landmark),

**COST OF THE ADDITIONAL WORK:** \$1,482,025.00

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**COSTS TO OTHER PARTY:** \$1,010,409.62  
**DEPARTMENT'S FUNDING:** \$471,615.38

**PAYMENT TERMS:**

GASTON COUNTY shall provide the full amount of their cost, \$1,010,409.62, prior to start of the Project.

**MAINTENANCE:** The Department shall maintain the structural components of Overpass Improvements. Gaston County shall maintain the aesthetic components of the Overpass and Interchange Improvements (brick veneer), and Overpass and Interchange Landscaping,

**EFFECTIVE DATES OF AGREEMENT:**

**START:** Upon Full Execution of this Agreement

**END:** When work is complete and all terms are met.

This **AGREEMENT** is made and entered into on the last date executed below, by and between the North Carolina Department of Transportation, an agency of the State of North Carolina, hereinafter referred to as the **DEPARTMENT** and GASTON COUNTY, hereinafter referred to as the **County**.

The parties to this Agreement, listed above, intend that this Agreement, together with all attachments, schedules, exhibits, and other documents that both are referenced in this Agreement and refer to this Agreement, represents the entire understanding between the parties with respect to its subject matter and supersedes any previous communication or agreements that may exist.

**I. WHEREAS STATEMENTS**

**WHEREAS**, this Agreement is made under the authority granted to the **Department** by the North Carolina General Assembly under General Statutes of North Carolina (NCGS), particularly Chapter 136-66.1 and 136-66.3; and,

**WHEREAS**, the **Department** and the **County** have agreed that the jurisdictional limits of the Parties, as of the date of entering the agreement for the above-mentioned project, are to be used in determining the duties, responsibilities, rights and legal obligations of the Parties hereto for the purposes of this Agreement; and,

**WHEREAS**, the **County** has requested that the **Department** perform all phases of said work or provide services; and,

**WHEREAS**, the Parties hereto wish to enter into an agreement for scoped work to be performed or provided by the **Department** (including reviews, goods or services) with reimbursement for the costs thereof by the **County** as hereinafter set out; and,

**NOW, THEREFORE**, this Agreement states the promises and undertakings of each party as herein provided, and the parties do hereby covenant and agree, each with the other, as follows:

## II. RESPONSIBILITIES

The **Department** shall be responsible for all phases of project delivery to include planning, design, right of way acquisition, utility relocation, and construction and maintenance as shown in the **PROJECT DELIVERY** Provision. The **County** shall be responsible for maintenance.

The **County** shall be responsible for maintenance of the additional work, as shown in the **PROJECT DELIVERY** Provision; and payment as shown in the **COSTS AND FUNDING** Provision.

## III. PROJECT DELIVERY REQUIREMENTS

### A. PLANNING, DESIGN, AND CONSTRUCTION

The **Department** will be responsible for preparing the environmental and/or planning document, obtaining any environmental permits and preparing the project plans and specifications.

The **Department** shall construct the Project in accordance with the plans and specifications for the Project. The **Department** shall administer the construction contract for said Project. All work shall be done in accordance with Departmental standards, specifications, policies and procedures.

### B. RIGHT OF WAY ACQUISITION

The **Department** will be responsible for acquiring any needed right of way required for the Project in accordance with the policies and procedures set forth in the North Carolina Right of Way Manual.

### C. COUNTY UTILITY RELOCATIONS

#### RESPONSIBILITIES

It is understood that there are no county-owned water and sewer lines to be adjusted or relocated at this time. If during the project it becomes necessary to adjust or relocate county-owned water and/or sewer lines, a separate Utility Agreement will be prepared at the appropriate time.

### D. MAINTENANCE

Upon completion of the Project:

1. The **Department** shall be responsible for all traffic operating controls and devices which shall be established, enforced, and installed and maintained in accordance with the North Carolina General Statutes, the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways, the latest edition of the "Policy on Street and Driveway Access to North Carolina Highway," and department criteria.
2. The roadway improvements that are within state-owned right of way shall be considered a part of the State Highway System and shall be owned and maintained by the **Department**.

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3. The Department shall be responsible for the maintenance of the structural components of the Interchange and Overpass Improvements as listed above.
4. The **County** shall maintain the aesthetic components of the Interchange and Overpass Improvements as listed above, and Interchange and Overpass Landscaping.

**IV. COSTS AND FUNDING**

**A. ADDITIONAL WORK**

At the request of the **County** and in accordance with the **Department's** Pedestrian Policy Guidelines or the Complete Streets Guidelines, the **Department** shall include provisions in its construction contract for the construction of pedestrian facilities and/or other additional work as indicated in Exhibit A, see attached. Said work shall be performed in accordance with the **Department's** policies, procedures, standards, and specifications, and the provisions of this Agreement.

The County share of the additional work is \$ 1,010,409.62.

**B. PROJECT COSTS**

The **County** has agreed to participate in Project costs as follows:

1. The total cost of the additional work is \$ 1,1482,025.00. The Department will participate in an amount not to exceed \$ 471,615.38. The County shall participate in a fixed amount of \$ 1,010,409.62 as shown on Exhibit A. It is understood by both parties that this is a fixed cost and will not be adjusted.
2. Upon notification from the **Department**, the **County** shall pay the full amount of their fixed cost, \$1,010,409.62, of the Additional Work. Reimbursement to the **Department** shall be made in one payment within thirty days of notification by the **Department**. This will be considered the **County's** full and complete participation, unless the **County** requests additional work not covered under this agreement.

**V. STANDARD PROVISIONS**

**A. Agreement Modifications**

Any modification to scope, funding, responsibilities, or time frame will be agreed upon by all parties by means of a written Supplemental Agreement.

**B. Assignment of Responsibilities**

The **Department** must approve any assignment or transfer of the responsibilities of the **County** set forth in this Agreement to other parties or entities.

**C. Agreement for Identified Parties Only**

This Agreement is solely for the benefit of the identified parties to the Agreement and is not intended to give any rights, claims, or benefits to third parties or to the public at large.

**D. Other Agreements**

The **County** is solely responsible for all agreements, contracts, and work orders entered into or issued by the **County** to meet the terms of this Agreement. The **Department** is not responsible for any expenses or obligations incurred for the terms of this Agreement except those specifically eligible for the funds and obligations as approved by the **Department** under the terms of this Agreement.

**E. Authorization to Execute**

The parties hereby acknowledge that the individual executing this Agreement has read this Agreement, conferred with legal counsel, fully understands its contents, and is authorized to execute this Agreement and to bind the respective parties to the terms contained herein.

**F. DocuSign**

**Department** and **County** acknowledge and agree that the electronic signature application DocuSign may be used, at the sole election of the **Department** or the **County**, to execute this Agreement. By selecting "I Agree," "I Accept," or other similar item, button, or icon via use of a keypad, mouse, or other device, as part of the DocuSign application, **Department** and **County** consent to be legally bound by the terms and conditions of Agreement and that such act constitutes **Department's** signature as if actually signed by **Department** in writing or **County's** signature as if actually signed by **County** in writing. **Department** and **County** also agree that no certification authority or other third-party verification is necessary to validate its electronic signature and that the lack of such certification or third-party verification will not in any way affect the enforceability of its electronic signature.

**Department** and **County** acknowledge and agree that delivery of a copy of this Agreement or any other document contemplated hereby through the DocuSign application, will have the same effect as physical delivery of the paper document bearing an original written signature.

**G. Debarment Policy**

It is the policy of the **Department** not to enter into any agreement with parties that have been debarred by any government agency (Federal or State). By execution of this agreement, the **County** certifies that neither it nor its agents or contractors are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any Federal or State Agency or **Department** and that it will not enter into agreements with any entity that is debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction.

**H. Indemnification**

To the extent authorized by state and federal claims statutes, the **County** shall be responsible for its actions under the terms of this agreement and save harmless the FHWA (if applicable), the **Department**, and the State of North Carolina, their respective officers, directors, principals,

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employees, agents, successors, and assigns to the extent allowed by law, from and against any and all claim for payment, damages and/or liabilities of any nature, asserted against the **Department** in connection with this Agreement. The **Department** shall not be liable and shall be held harmless from any and all third-party claims that might arise on account of the **County's** negligence and/or responsibilities under the terms of this agreement.

**I. Availability of Funds**

All terms and conditions of this Agreement are dependent upon, and, subject to the allocation of funds for the purpose set forth in the Agreement and the Agreement shall automatically terminate if funds cease to be available.

**J. Gift Ban**

By Executive Order 24, issued by Governor Perdue, and NCGS 133-32, it is unlawful for any vendor or contractor (i.e. architect, bidder, contractor, construction manager, design professional, engineer, landlord, offeror, seller, subcontractor, supplier, or vendor), to make gifts or to give favors to any State employee of the Governor's Cabinet Agencies (i.e. Administration, Commerce, Environmental Quality, Health and Human Services, Information Technology, Military and Veterans Affairs, Natural and Cultural Resources, Public Safety, Revenue, Transportation, and the Office of the Governor).



**SIGNATURE PAGE**

IN WITNESS WHEREOF, this Agreement has been executed the day and year heretofore set out, on the part of the DEPARTMENT and the COUNTY by authority duly given.

Gaston County

FED TAX ID NO: \_\_\_\_\_

REMITTANCE ADDRESS:

\_\_\_\_\_  
\_\_\_\_\_

Authorized Signer: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date Signed: \_\_\_\_\_

**If applicable, this Agreement has been pre-audited in the manner required by the Local Government Budget and Fiscal Act:**

Finance Officer: \_\_\_\_\_

Print Name: \_\_\_\_\_

Date Signed: \_\_\_\_\_

**DEPARTMENT OF TRANSPORTATION**

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

APPROVED BY BOARD OF TRANSPORTATION ITEM O: \_\_\_\_\_ (DATE)

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EXHIBIT A

Additional Work		
Betterment Description	Quantity	Cost to County
<ul style="list-style-type: none"> <li>• Overpass Improvements <ul style="list-style-type: none"> <li>○ SR 2000 (Hickory Grove Road) over I-85</li> </ul> </li> </ul>	1	\$368,500.00
<ul style="list-style-type: none"> <li>• Interchange Improvements – Existing Structure <ul style="list-style-type: none"> <li>○ I-85 / NC 273 (Beatty Drive) (Exit 27)</li> </ul> </li> </ul>	1	\$207,900.00
<ul style="list-style-type: none"> <li>• Overpass Landscaping Betterment (Enhanced) <ul style="list-style-type: none"> <li>○ SR 2000 (Hickory Grove Road) over I-85</li> </ul> </li> </ul>	1	\$301,875.00
<ul style="list-style-type: none"> <li>• Interchange Landscaping Betterment (Landmark) <ul style="list-style-type: none"> <li>○ I-85 / NC 273 (Beatty Drive) (Exit 27)</li> </ul> </li> </ul>	1	\$603,750.00
<b>Total Cost</b>		<b>\$1,482,025.00</b>
<b>Department Participation</b>		<b>\$471,615.38</b>
<b>Cost to County</b>		<b>\$1,010,409.62</b>

**AESTHETICS SCOPE OF WORK** (01-07-25)**GENERAL**

The aesthetic design and construction of the project shall include aesthetic treatments to roadway, bridge and other elements in a cost and maintenance conscious manner.

The I-5719B / U-5800 Aesthetics are based on input from the Department and Local Governments within the Project Study Area and provides a visual representation of the desired aesthetic theme throughout the I-85 Corridor.

The Design-Build Team is encouraged to consider aspect ratios in the modification of any aesthetic element; but warned that design modifications shall not lessen the visual effect on the travelling public. The Design-Build Team shall ensure that all aspects of the aesthetic features, including but not limited to structural details and dimensions, adhere to the appropriate engineering standards and the RFP requirements.

The Design-Build Team shall provide conceptual drawing and renderings in the Technical Proposal. The Proposer shall also address the attributes of their approach to aesthetics in their Oral Presentation with the Technical Review Committee.

Aesthetic landscaping will not be the responsibility of the Design-Build Team.

**BRIDGE AESTHETICS**

Unless otherwise noted in this RFP, the Design-Build Team shall provide vertical abutments at all proposed bridges. The Design-Build Team shall provide square columns for all proposed interior bents.

Bridges within the project limits shall be constructed with the following betterments:

**High End Bridge Aesthetic Betterments**

High End Aesthetic Betterments shall, at a minimum, include the following elements:

- Vertical abutments, turned-back retaining walls (where used), and parallel wing walls (where used) shall have a brick veneer.
- Exterior face and bottom of exterior concrete girders, columns, and wingwalls (or earwalls where MSE abutments are used) shall be concrete
- Medallions on the ends of bent caps – City of Lowell logo without name at NC 7 (McAdenville Road / Main Street) and City of Belmont logo without name at SR 2093 (Belmont Mt Holly Road / Main Street)
- Debossed street / name identification on each side of the bridge
- Black protected coated two-bar rail system

- High-End Bridge Aesthetic Betterments shall be applied to bridges at the following locations:
  - NC 7 (McAdenville Road / Main Street) and I-85 (Exit 23)
  - SR 2093 (Belmont Mt Holly Road / Main Street) and I-85 (Exit 26)

### **Mid-Grade Bridge Aesthetic Betterments**

Mid-Grade Aesthetic Betterments shall, at a minimum, include the following elements:

- Vertical abutments, turned-back retaining walls (where used), and parallel wing walls (where used) shall have a brick veneer.
- Medallions on the ends of bent caps – Gaston County logo without name at SR 2000 (Hickory Grove Road)
- Debossed street / name identification on each side of the bridge
- Black protected coated two-bar rail system
- Mid-Grade Bridge Aesthetic Betterments shall be applied to bridges at the following locations:
  - SR 2000 (Hickory Grove Road) and I-85

### **Piedmont and Northern Railway (P & N) Spur Line Bridge**

The Design-Build Team shall, at a minimum, include the following elements:

- Medallions on the ends of bent caps, P& N logo without name.
- Debossed name identification, Piedmont and Northern Railway, on each side of the bridge.
- Railings, shall be either aluminum or galvanized steel, see the Preliminary Concept Drawing – Typical Section
  - Eastern side four bar metal rail
  - Median / center parapet four bar metal rail
  - Western side two bar metal rail
- Steel girders
- Interior bent columns and caps shall be square or rectangular and closely match the existing columns and caps in appearance.
- Shoulder bent columns and caps shall be square or rectangular and closely match the existing columns and caps in appearance.
- Spill through bents shall be constructed

**NC 273 (Beatty Drive) (Exit 27)**

Upon completion of rehabilitation work the Design-Build Team shall pressure wash all existing concrete parapets, slope protection, barriers, and bents (shoulder and center) and apply tinted anti-graffiti coating to the bents and parapets.

The Design-Build Team shall, at a minimum, include the following elements:

- Medallions on the ends of bent caps, City of Belmont logo without name.
- Remove the existing three-bar rail system and replace it with black protected coated three-bar rail system.

Vertical abutments shall at a minimum include concrete bridge quoins, cheek walls, emblems, and wall caps. Any necessary pedestrian railings and decorative fencing shall match all other railings and decorative fencing within the project.

Unless otherwise noted in this RFP, concrete girders are preferred for all new bridges over any roadway. In the event that steel girders are used for these bridges, the steel shall be AASHTO M270 Grade 50 and painted in accordance with the *Standard Specifications*. All steel girders on new bridges on the Project shall be painted the same color as the concrete girders.

Barrier rail or parapet on the bridges shall extend to the end of the MSE turned-back retaining wall before transitioning to guardrail.

Except for the bridge at I-85 over South Fork Catawba River and the bridge for the P & N Spur Line over I-85 all proposed bridge barrier rails on roadways over I-85 shall have black protective coated metal rails.

**Debossed Street / Name Identification on Bridge**

Street / Name Identification signage will be located on the bridge parapet above the outer travel lane, facing the flow of traffic, centered horizontally and vertically. The letter size should be legible, and lengthy crossroad names may use multiple barrier segments.

A reverse mold casting or other accepted means shall be made to accurately create the new identification.

**Medallions**

The proposed medallions on the bents end caps and cheek walls shall match. The Emblems at interior bent(s) shall be placed on the exterior faces where multiple substructure units are used for a single bent line.

**Railings**

The Design-Build Team shall provide railings in accordance with the following requirements:

- Railing shall be continuous from end post to end post of bridge. Each joint in rail length shall be spliced as detailed. Panel lengths of rail shall be attached to a minimum of three posts.
- The end of rail to clear face of concrete end post dimension.
- Cap screws shall be ASTM F593 alloy 305 stainless steel. Washers shall meet the requirements of ASTM F844 except they shall be made from alloy 304 stainless steel.
- Certified mill reports are required for rails and posts. Shop inspection is not required.
- Metal rail posts shall be set normal to curb grade.
- To insure future identification of the fabricator, a permanent identifying mark shall be placed on each post. The method of marking and location shall be such that it does not detract from the appearance of the post, but remains visible after rail placement.
- Shims shall be used as necessary for post alignment.
- Alloy 6351-T5 may be substituted for alloy 6061-T6 where applicable.
- Minor variations in details of metal rail will be considered. Details of such variations, if desired, shall be submitted for approval.

**Aluminum Rails**

The Design-Build Team shall provide aluminum rails in accordance with the following requirements:

- Material for posts, bases and rails, expansion bars and clamp bars shall be ASTM B-221 alloy 6061-T6
- Material for rivets shall be ASTM B316 alloy 6061-T6. Rivets shall be standard button head and cone point cold driven as per drawing.
- The base of rail posts, or any other aluminum surface in contact with concrete shall be thoroughly coated with an aluminum impregnated caulking compound of approved quality
- Material for shims to be ASTM B209 alloy 6061-T6.

### **Galvanized Steel Rails**

The Design-Build Team shall provide materials and galvanizing for galvanized steel rails to conform to the following specifications:

- Post, post bases, rails, expansion bars and clamp bars: ASTM A36 Grade 36 structural steel galvanized to ASTM A123.
- Rivets shall meet the requirements of ASTM A502 for Grade 1 rivets.
- The cut ends of galvanized steel railing, after grinding smooth shall be given two coats of zinc rich paint meeting the requirements of federal specification MIL-P-26915 USAF Type 1, or of Federal Specifications TT-P-641.
- Shims shall meet the requirements of ASTM A1011 for Grade 36, 40, 45 or ASTM A1008 for Grade C and shall be galvanized in accordance with ASTM A123.
- Rail caps shall meet the requirements of ASTM A1011 for Grade 36, 40, 45 or ASTM A1008 for Grade C and shall be galvanized in accordance with ASTM A123

### **SOUND BARRIER WALLS**

Reference the *Sound Barrier Wall – Ground Mounted* Project Special Provision, the *Sound Barrier Wall – Bridge Mounted* Project Special Provision, the *Architectural Concrete Surface Treatment* Project Special Provision, and the Structures Scope of Work found elsewhere in this RFP.

### **RETAINING WALLS AND VERTICAL ABUTMENT WALLS**

Unless otherwise noted elsewhere in this RFP, the traffic face of all retaining walls and vertical abutment walls, including retaining walls in front of roadway bridge end bents, shall be designed and constructed as noted below:

- The Design-Build Team shall design and construct walls with a minimum eight-foot panel width.
- The Design-Build Team shall design and construct all walls visible from I-85 that are 10.5' tall or higher in accordance with the requirements noted below:
  - From the bottom of the single-faced concrete barrier in front of the wall to a minimum six-foot height / maximum seven-foot height, the wall shall be standard smooth finish concrete. The Design-Build Team shall step the top of the aforementioned smooth finish concrete at one-foot vertical per horizontal panel(s).
  - The top of all walls shall have concrete coping of a uniform height. The coping height shall be 18 inches, unless the overall wall height will not accommodate an additional row of bricks in one or more panels. In which case the coping height shall be uniformly increased.

- From the top of the aforementioned smooth finish concrete portion of the wall to the bottom of the aforementioned concrete coping, all visible sections of the wall shall be brick veneer that provide a traditional brick wall appearance with running bond and header courses. The brick shall match the appearance of the brick used on project bridges and shall be approved by the Engineer prior to installation. If the Design-Build Team designs and constructs a wall behind the aforementioned brick veneer, the Design-Build Team shall provide panel anchor details for the Department's review and approval.
- Throughout all sections of the brick veneer, the Design-Build Team shall design and construct continuous two-foot wide, smoothly finished, concrete vertical dividers in accordance with the requirements noted below:
  - The Design-Build Team will not be required to space the concrete vertical dividers uniformly.
  - Excluding the sections of brick embedded concrete panels directly beneath a bridge, all concrete vertical dividers shall be spaced between 24.0' and 64.0' apart.
  - The Design-Build Team shall design and construct a concrete bridge quoins or vertical divider at all bridge edges.
  - The Design-Build Team shall design and construct a concrete vertical divider at the end of all brick sections.

The Design-Build Team will not be required to include the aforementioned concrete vertical dividers in the Technical Proposal aesthetic renderings.

- The Design-Build Team shall design and construct all walls visible from I-85 that are less than 10.5' tall with standard smooth finish concrete.
- All retaining walls visible to I-85 traffic shall have a brick veneer. The Design-Build Team may utilize full size (2 2/3" x 8" nominal or 2 2/3" x 12" nominal) clay brick. The brick pattern of the retaining walls shall extend a minimum of two feet below the final grade.
- The Design-Build Team shall design and construct all MSE walls that are not visible from I-85 with panels that are rectangular, smoothly finished concrete, and oriented in a horizontal running bond or stacked pattern.
- Unless noted otherwise elsewhere in this RFP, the top of all retaining walls shall be stepped at two-foot vertical per horizontal panel(s).
- The top of retaining walls located between a ramp and the -L- Line shall be sloped to match the ramp profile.
- The top of retaining walls in front of sloped bridge end bents shall be sloped to match the end bent slope.
- The Design-Build Team shall consistently step the top of wingwalls at either two or three-foot vertical per horizontal panel.

## **ANTI-GRAFFITI COATING**

The Design-Build Team shall apply anti-graffiti coating that is compatible with the concrete color system / stain on all noise walls. After application, the anti-graffiti coating shall be dry to the touch within one hour and shall achieve a final cure within three hours.



The color of the anti-graffiti coating shall be clear after full cure. The Design-Build Team shall provide specifications for the anti-graffiti coating and one gallon of graffiti remover, thinners, dryers, and all necessary components recommended by the manufacturer to the North Carolina Department of Transportation Materials and Tests Unit, Chemical Testing Engineer.

The anti-graffiti coating shall be applied by brush, roller or airless spray when the ambient temperature is between 45° F and 90° F, and the surface temperature is between 50° F and 100° F or as required by the manufacture. Ensure the surface is clean and dry before applying the anti-graffiti coating. The minimum dry film thickness of the anti-graffiti coating shall be 2.0 mils.

Anti-graffiti coating is also required on other elements as required by the Structures Scope of Work found elsewhere in this RFP.

### **BRICK VENEER**

The Design-Build Team shall utilize full size (2 2/3" x 8" nominal or 2 2/3" x 12" nominal) clay brick. The full brick along vertical abutments, turned-back retaining walls (where used), parallel wing walls (where used), and retaining walls shall extend a minimum of two-foot below the final grade.

The brick veneer shall be a tricolor brick and one of the following types:

CHEROKEE BRICK  
Windsor

TRIANGLE BRICK COMPANY  
Boylan Heights

PINE HALL BRICK COMPANY, INC.  
Spektra Wire Cut Full Range

OLD CAROLINA BRICK CO.  
Old Post Office

The Design-Build Team has the option of supplying an alternative type of tricolor brick, as long as the tricolor brick selected is approved, in writing, as an equal or approved alternative by the Engineer and the Local Governments.

## ROUNDAABOUTS

The Design-Build Team shall design and construct all roundabouts with the following elements:

### Concrete Collar

The center island shall have a four-inch thick, ten-foot wide concrete collar from the back of the 9" x 14" concrete curb towards the center of the island. The concrete cap shall be dyed red to match the Federal Standard 10115 or 10233 found in the *AMS Standard 595 Color*.

### Irrigation System

The Design-Build Team shall provide the Engineer with a professionally designed irrigation system plan and installation details. Upon Department acceptance of the irrigation system plan and installation details, the Design-Build Team shall install the irrigation system.

Basic installation details for this project include: the system shall be constructed using new pipe, elbows, connectors, controller components, etc. No used, or secondary-market components will be permitted. At a minimum the irrigation system design shall include the location of a backflow preventer / device, shutoff(s) and a drain(s) for winterization, and schedule 40 primed and glued PVC piping appropriately sized to deliver adequate water pressure and flow to pop-up, fully adjustable irrigation heads. Note: the application of PVC approved cleaner / primer and the subsequent application of glue (PVC approved) shall be two-separate applications. The system shall be an electric system with an onsite control box - zoned to deliver uniform, head-to-head coverage of entire planter box surface. No stream-rotors shall be included in the design.

Prior to the start of any work, the Contractor shall verify available static water pressure (PSI) and gallons per minute (GPM) at point of connection to water service. Any replacement, relocation or additional materials required as a failure to check (PSI) and (GPM) shall be done at the Contractor's expense.

The irrigation contractor shall, in the presence of Cities of Belmont and Lowell employees responsible for maintenance of the system, meet the following obligations:

- Explain the complete operation of the system,
- Be available to answer any questions of system operators during the first year of operation,
- Winterize the system, during November of the first year of operation,
- Reenergize the irrigation system in April the following year and check the system for full operation.

Control wire must meet the following installation specifications:

- Wire shall be insulated single strand copper designed for twenty (20) to fifty (50) volts and UL approved as Type U.F. (Underground Feeder),

- Copper conductor must meet or exceed ASTM B-3 requirements,
- Red and white colors shall be available for common and lead-in wires,
- Yellow color shall be provided for spare wires,
- All pipe shall be trenched to a minimum of 12 inches and backfilled with the engineered soil or irrigation may be installed prior to the last 12 inches of engineered soil is installed. The irrigation pipe shall be installed so as to not interfere with plant placement. Control wire and PVC pipe shall be installed in the same trench.

Other irrigation specifications:

- Electrical tape shall be black plastic, three-quarters (3/4) inch wide and a minimum of 0.007 inches thick and the all-weather type,
- All flexible nipples or pipe joints shall be "Toro Funny Pipe"; "Rainbird Swing Pipe"; "Triple Swing Joint Assembly" or approved equal,
- All electrical wire splices must be made watertight with sealing 3M Direct Burial Splice Kit or approved equal,
- Thrust blocking shall be on three (3) inch and larger mainline piping only.

## FENCING

The Design-Build Team shall construct all fencing with the following betterments:

### **Control of Access Fence**

All control of access fencing shall be four-foot high and shall consist of the following types of fencing:

- Chain Link fencing shall be Vinyl Coated Chain Link fencing with anodized rails and post. The Vinyl Coated Chain Link fencing, rails, and posts shall be black.
- Woven Wire fencing shall be as listed in the *Standard Specifications*.

### **Permanent Retaining Wall Structures Fence**

All Permanent Retaining Wall Structures fencing shall be Vinyl Coated Chain Link fencing with anodized rails and post. The Vinyl Coated Chain Link fencing, rails, and posts shall be black.

### **Ornamental Fencing between the P & N Spur Line and Belmont Rail Trail**

The Design-Build Team shall install four-foot high ornamental fencing between the P & N Spur Line and Belmont Rail Trail, excluding the bridge median / center parapet. The ornamental fencing shall begin approximately 25 feet north of the proposed back of curb of the northeast quadrant of the NC 7 (N. Main Street) / US 29 / 74 (Wilkinson Boulevard) intersection and extend northward to approximately 20 feet of the eastern right of way limits for the proposed SR 2093 (Belmont Mt Holly Road) and P & N crossing. The ornamental fencing shall consist of the following types of decorative fencing:

Ornamental Fence with metal pickets and three rails with a smooth top rail. Ornamental Fence shall be black and one of the following types:

SPECRAIL  
Specrail Commercial (SC)

SPECRAIL  
Saybrook (S4)

AMERISTAR  
AEGIS Plus Majestic 3-Rail

Ultra Aluminum Mfg., Inc.  
UAF 200 Flat Top

The Design-Build Team has the option of supplying an alternative type of ornamental fence, as long as the ornamental fence selected is approved, in writing, as an equal or approved alternative by the Engineer and the City of Belmont.

## **SIDEWALKS**

The Design-Build Team shall design and construct all concrete sidewalks with scored joints at five foot on center. Where used, joint sealant shall be light gray, to match concrete surface.

## **CROSSWALKS**

At all crosswalks the Design-Build Teams shall provide the following:

- Curb ramps and ADA Detectable Warning Mats according to ADA and 2024 NCDOT *Roadway Standard Drawing* No. 848.05. Detectable Warning Mats shall be black.
- Where medians are present and a minimum of six-foot in width, provide refuge islands for pedestrians.

## **LIGHTING**

### **Pedestrian Lighting**

The Design-Build Team shall design and install pedestrian lighting requirements noted in the Lighting Scope of Work found elsewhere in this RFP and the requirements noted below:

### **MUP Lighting on the P&N Spur Bridge**

The Design-Build Team shall design and construct Pedestrian Lighting of the MUP on the P&N Spur Bridge – Interior Wall Lighting in the Parapet (anticipated 12-foot spacing at an anticipated height of 28 inches above the walking surface).

The lighting system for the MUP on the P&N Spur Bridge shall include, at a minimum of one 1-inch conduit, junction box(s) (sized per NEC requirements), luminaire boxes, and fixtures. All lighting shall be LED.

For pedestrian safety and visibility, the Design-Build Team shall provide fixtures to be mounted in the interior concrete parapet at a height a spacing shown on the plans developed by the Design-Build Team. These fixtures shall be small enough to be unobtrusive yet provide ample lighting for users. All pedestrian lighting shall be full cut off / Dark Sky Compliant. Pedestrian light fixtures shall be black, chosen from one of the following types:

FC Lighting  
FCSL2008

FC Lighting  
FCSL2040 (4 Watt)

VISTA Commercial Outdoor Lighting  
1505-L

VISTA Commercial Outdoor Lighting  
1503-L

- Fixture, and other hardware shall be matte black to match the fencing.

The Design-Build Team has the option of supplying an alternative type of fixture(s), as long as the fixture(s) selected is approved, in writing, as an equal or approved alternative by the Engineer and the City of Belmont.

### **Bridge Lighting**

The Design-Build Team shall, at a minimum, install two 3-inch conduits and a single 2-inch conduit with 24" (h) x 36" (w) x 9" (d) formed opening with double plate on the following bridges within the municipal limits of the Cities of Lowell, McAdenville and Belmont and in Gaston County the Design-Build Team for future lighting, see the Lighting Scope of Work found elsewhere in this RFP:

- NC 7 (McAdenville Road/Main Street) (Exit 23)
- SR 2000 (Hickory Grove Road) – Overpass
- SR 2093 (Belmont Mt Holly Road/Main Street) (Exit 26)

## **DESIGN REQUIREMENTS**

The Design-Build Team shall ensure that the aesthetic details incorporated into the plans developed by the Design-Build Team will meet the appropriate engineering standards and the RFP requirements.

### **Preliminary Design**

After contract award, the Design-Build Team shall clearly present, with appropriate visual aids, the design intent, their aesthetic theme, general plan, color scheme(s) and preliminary details for each design element. The Design-Build Team shall allow 30 days for review of the aesthetic details.

### **Final Design**

The Design-Build Team shall include the accepted aesthetics details with the appropriate submittal of preliminary and final designs plans for each element (bridge, roadway, structure, lighting, etc.)

The Design-Build Team shall develop and submit for review any specifications, material requirements or construction processes needed to accomplish the aesthetic work along with the final design submittal for each element.

### **RFC Design**

The Design-Build Team shall include the accepted aesthetics details with the appropriate submittal of preliminary and final designs plans for each element (bridge, roadway, structure, lighting, etc.)

### **Materials, Construction, and Fabrication**

The Design-Build Team shall demonstrate the long-term durability of any color application (staining, anodizing, painting, etc.) on any feature proposed. Provide a minimum of three test panels, produced in different batches, of each product to demonstrate the consistency of color.

Proposers shall demonstrate in their aesthetics detail show joints will be eliminated or otherwise masked from affecting the overall appearance and continuity of the wall.

Three full size mockup panels will be required for each type of colored concrete / textured element on the project, including but not limited to features that are anodized and / or painted, emblems and embossed street / name identification. At their own risk, the Design-Build Team may elect to use production elements as the test panels.