

PROJECT MANUAL

FOR

Main Street Sidewalk Connector

TOHS PROJECT NO. 22-007

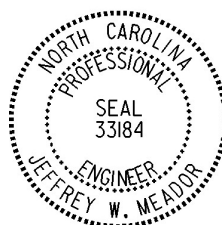
TIP. No. BL-0052

Wednesday, September 2nd, 2026



MAYOR:
TOWN CLERK:
TOWN MANAGER:
EXEC. DIR. - U & I SERVICES:
ASST. DIR. - TRANSPORTATION :
PROJECT MANAGER:

MIKE KONDRATICK
LINDA MCKINNEY
RANDY HARRINGTON
KENDRA D PARRISH, P.E. CFM
CARRIE MITCHELL PE,CFM, CPSEC
MORGAN NELSON , P.E.



**Main Street Sidewalk Connector
TOHS Project No. 22-007
TIP. No. BL-0052
TABLE OF CONTENTS**

GENERAL REQUIREMENTS

Section	00150	TABLE OF CONTENTS	00150-1
Section	00200	INVITATION TO BID	00200-1
Section	00250	INSTRUCTIONS TO BIDDERS	00250-1 – 00250-4
Section	00300	PROPOSAL	00300-1 – 00300-21
Section	00500	AGREEMENT (CONTRACT)	00500-1 – 00500-17
Section	00510	ITEMIZED BID PROPOSAL	00510-1 – 00500-3
Section	00900	APPLICATIONS FOR PROGRESS PAYMENT	00900-1 – 00900-12
Section	00910	CERTIFICATE OF TOWN ATTORNEY	00910-1

TECHNICAL SPECIFICATIONS

Section	01000	DEFINITIONS, ABBREVIATIONS and REFERENCE STANDARDS	01000-1 – 01000-6
Section	02000	SUBMITTALS	02000-1 – 02000-3
Section	03000	CLEARING AND GRUBBING	03000-1 – 03000-2
Section	04000	EARTHWORK	04000-1 – 04000-5
Section	06000	CAST-IN-PLACE CONCRETE	06000-1 – 06000-6
Section	09000	STORM DRAINAGE	09000-1 – 09000-4
Section	13000	UTILITY WORK ALONG HIGHWAYS	13000-1 – 13000-5
Section	16000	SOIL EROSION AND SEDIMENTATION CONTROL	16000-1 – 16000-13
Section	18000	PAVEMENT MARKINGS	18000-1
Section	20000	CONSTRUCTION TRAFFIC CONTROL	20000-1 – 20000-4
Section	21000	FIRE HYDRANT SPECIFICATIONS AND DETAILS	21000-1 – 21000-35
NCDOT STANDARD NOTES			1 – 2
ALLOWABLE CHANGES TO 2024 SPECS			3
GENERAL PROVISIONS			G-1 THRU G-14
ROADWAY PROVISIONS			R-1 THRU R-10
PROJECT SPECIAL PROVISIONS			PSP-1 THRU PSP-11
STANDARD SPECIAL PROVISIONS			SSP-1 THRU SSP-36
PERMITS			ATTACHED
SIGNATURE SHEET			ATTACHED
EXECUTION OF BID			ATTACHED
LETTER OF INTENT TO PERFORM AS SUBCONTRACTOR			ATTACHED
PROCEDURE FOR REPORTING SALES TAX			ATTACHED
APPENDIX			ATTACHED

INVITATION TO BID

TOWN OF HOLLY SPRINGS
Holly Springs, North Carolina

September 1, 2026

Sealed bids will be received by the Town of Holly Springs until Thursday, October 1, 2026 at 2:00 pm and thereafter immediately opened and read publicly in Council Chambers at 128 S. Main Street, Holly Springs, NC 27540 for the Main Street Sidewalk Connector Town of Holly Springs Project No. 22-007 NCDOT TIP No. BL-0052. The project is generally described as follows:

The Town of Holly Springs proposes to add approximately 1200' of sidewalk along the east side of N. Main Street from Trellis Pointe Drive to Arbor Creek Drive in Holly Springs, NC. The project includes the removal of soil and rock from the existing roadside and installation of a roadside ditch and guardrail.

Plans, Specifications, and Contract documents can be viewed on the Town's website at: <https://www.hollyspringsnc.gov/2456/Bids-Requests-for-Proposals>. It is recommended bidders sign up for "Construction Bids" notifications at <https://www.hollyspringsnc.gov/2456/Bids-Requests-for-Proposals> for further project notifications/addenda.

All project questions or requests for clarification should be submitted to the Project Manager, Morgan Nelson, PE, in writing via e-mail at Morgan.Nelson@hollyspringsnc.gov by September 17, 2026 at 5:00 pm.

All addenda, including answers to questions, will be posted under the associated solicitation on the Town's website at <https://www.hollyspringsnc.gov/2456/Bids-Requests-for-Proposals> on Thursday, September 24, 2026.

A mandatory Pre-Bid Conference will be held at 1:00PM-2:30PM September 14, 2026 in the Luncie McNeil Jr. Multi-purpose Room at 425 Innovate Avenue, Holly Springs, NC 27540.

Award will be made to the lowest, responsive, responsible bidder unless all bids are rejected. The Town of Holly Springs reserves the right to reject any or all bids.

Contractors offering a proposal on this project must be licensed to do the specified type of contracting in the State of North Carolina. The Use of any sub-contractor on this project must be approved by the Engineer. Any bidder that is currently in litigation with the town will be disqualified from bidding.

All bids shall include the entire contract document bound as it was presented for bid, with applicable bidding information filled out. Do not remove sections and resubmit. Each proposal shall be accompanied by a certified check or bid bond in the amount of not less than five percent (5%) of the amount of the total of the itemized bid in the form and subject to the conditions provided in the Instruction to Bidders.

Kendra D. Parrish, PE
Executive Director
Utilities & Infrastructure

INSTRUCTIONS TO BIDDERS

Each proposal shall be submitted in a sealed envelope on the printed form, or exact copies thereof, contained in the Contract Documents. These proposals shall be plainly marked:

**“BID ENCLOSED
Main Street Sidewalk Connector
Town of Holly Springs Project No. 22-007”**

The envelope shall also be marked with the **Bidder's name, address, North Carolina contractor license number**, and name and phone number of a contact person. **All bids shall include the entire contract document bound as it was presented for bid, with applicable bidding information filled out. Do not remove section and resubmit.**

The envelope shall show the **date and time of the Bid Opening** in order to guard against premature opening of the Bid.

Deliver bids to: Attn: Brettany DeVold
 Finance Department Front Desk
 Town of Holly Springs
 128 South Main Street
 Holly Springs, NC 27540

Bids submitted by facsimile shall not be accepted.

The Owner may consider non-responsive any Bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all Bids.

Each proposal shall be accompanied by a Bid Bond payable to the Town of Holly Springs for an amount of not less than five percent (5%) of the total amount bid; or in lieu of the Bid Bond, the bidder may offer a certified check in an amount of not less than five percent (5%) of the total amount bid. The Bids and bidder's bond or checks of all bidders may be held for a period of ninety (90) days pending award of the contract. Notification of award of contract shall be evidence of intent to contract and shall extend time for holding the contractor's bid surety for a time mutually agreed between the Town of Holly Springs and the bidder.

Each proposal is required to have a page providing references to include the company name, address, phone number, e-mail and contact name and position and the type of work completed.

Withdrawal of bid: A formal bid can be withdrawn without penalty (meaning the bid deposit is not forfeited) at any time before the bid opening. However, after the bids have been opened, a bidder can withdraw his bid without penalty only if the bid price was based on a substantial error or omission that was clerical (not a judgment error), and the bid was submitted in good faith. The bidder must submit a written request to withdraw the bid within 72 hours after the bid opening. The Town will review the request to withdraw and issue a written decision within 5 days. Any bidder who withdraws may not rebid on the project or provide materials, equipment, or labor to a contractor or subcontractor performing on the contract from which the bidder withdrew without the written permission of the Town; a violation of this prohibition is a Class 1 misdemeanor.

AWARDING CONTRACT

"The Town of Holly Springs, in accordance with the provisions of *Title VI of the Civil Rights Act of 1964* (78 Stat. 252) and the Regulations of the Department of Transportation (49 C.F.R., Part 21), issued pursuant to such act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the grounds of race, creed, color, national origin, age, sex, disability, marital status, handicap, gender, gender identity or expression, retaliation, or sexual orientation.

Award will be made to the lowest responsible and responsive Bidder for each Contract as soon as practicable, provided that in the selection of equipment or materials, a Contract may be awarded to a responsible Bidder other than the lowest in the interest of standardization or if ultimate economy is clearly evident.

Evaluation of Bids

1. All spaces for lump sum and unit prices in the Bid Form shall be filled in with a number. Spaces left blank will be evaluated as zero (\$0.00).
2. Discrepancies between the multiplication of units of Work and Unit Prices will be resolved in favor of the Unit Prices.
3. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
4. Discrepancies between words and figures will be resolved in favor of the words.

The award of the Contract, if it is awarded, will be to the lowest responsive, responsible bidder on the base bid whose qualifications indicate the award will be in the best interest of the Town of Holly Springs. The Town of Holly Springs reserves the right to waive technicalities and/or reject any or all bids.

The Owner will not consider any bid or award of Contract to any person, firm, or corporation who has defaulted in any obligation to the Owner or who, in the opinion of the Owner, failed to perform their work satisfactorily, either as to character or time.

Any bidder that is currently in litigation with the town will be disqualified from bidding.

A conditioned or qualified bid will not be accepted.

Requirements for the submittal information will vary based on the complexity and importance of the product to the project as a whole. Submittals should be prepared in a concise and straightforward manner. Submittals shall clearly identify variances from the specifications. Products that clearly do not meet the requirements of the specifications and plans should not be submitted.

Unless noted, products shall be the manufacturer's standard offering, with standard options.

Incomplete submittals, or submittals received after the deadline, shall not be considered.

Submittals are to be delivered to the Engineer at the address indicated in the "Notice To Bidders". The Owner and Engineer shall review all submittals and issue an Addendum to all document holders no later than 7 days prior to the bid opening date, listing the approved products.

Pre-approval of materials or equipment does not, in any manner, preclude the manufacturer from meeting the full requirements of the specifications, including any performance guarantees required, unless specific exceptions are noted in the pre-approval.

No Post-Bid substitutions shall be permitted except as herein provided.

Pursuant to N.C.G.S. § 44A-26, construction or repair contracts require performance and payment bonds of 100% if the amount bid is \$300,000 or more, or Pursuant to N.C.G.S. § 143-129(c). These bonds are submitted after the award is made to a contractor but before a contract is executed. A Performance Bond and a Payment Bond, each in the amount of one hundred percent (100%) of the contract price, with a corporate surety approved by the Town of Holly Springs, will be required for the faithful performance of the contract. Bidders shall provide certification that performance and payment bond sureties are licensed in North Carolina.

Reference Sheet
(To be filled out with each submittal package)

Company Name	Address	Phone	E-mail	Contact person Name	Contact Person Position	Type of Work Completed

- END OF SECTION 00250 -

SECTION 00300
BID PROPOSAL ("Proposal")

TO: THE TOWN OF HOLLY SPRINGS, NORTH CAROLINA ("Owner")

FROM: "BIDDER" _____

ADDRESS _____

DATE OF BID _____, 20__

The Bidder hereby signifies that it is his/her/its intention and purpose to enter into a formal Contract with the Town of HOLLY SPRINGS, North Carolina, to furnish all labor, materials, tools, equipment, apparatus, supplies, and the like required, and to do all the work necessary, for and because of the construction, erection, and/or installation of the proposed "Project":

**Main Street Sidewalk Connector,
TIP Number BL-0052, TOHS Project Number 22-007**

for the Town of HOLLY SPRINGS, North Carolina in accordance with the Contract Documents, including Addenda thereto.** There is deposited, herewith, a certified check in the amount of (must be dollar amount): _____ Dollars (\$_____), or a Bid Bond, in the amount of five percent (5%) of the total aggregate amount of the Bid, made payable to the Owner, the same to be refunded to the Bidder under the conditions of and in accordance with the terms of this Proposal, which are as follows:

THAT: The Bidder has carefully examined the Plans and Specifications and all other Contract Documents and fully understands them.

THAT: The Bidder has carefully examined the site of the Project and is familiar with the conditions under which the work, or any part thereof, is to be performed and the conditions which must be fulfilled in furnishing and/or installing, erecting or constructing any or all items of the Project.

THAT: The Bidder shall provide all necessary tools, machinery, equipment, apparatus, and all other means necessary to do all the work and shall furnish all labor, materials and all else required to complete such Contract as may be entered into, in the manner prescribed in and in accordance with the terms of the Specifications and the Contract and in accordance with the true intent and meaning thereof, and in accordance with the Plans and/or Drawings and the requirements of the Consulting Engineers under them, in a first class manner.

[Terms continued on the following page.]

** Fill in appropriate Addenda number(s): Addendum # _____ Dated _____
Addendum # _____ Dated _____
Addendum # _____ Dated _____
Addendum # _____ Dated _____
Addendum # _____ Dated _____
Addendum # _____ Dated _____

THAT: The rights of the Owner and the recommendations of the Consulting Engineers shall not be questioned in the Award of the Contract.

THAT: It is the intention of the Owner to let contracts on the basis of the Bids received in accordance with G.S. 143-129 and in such manner as the Owner may deem to be for the best interests of the Owner.

THAT: The Owner reserves the right to reject any or all proposals.

THAT: The work under each Section will be awarded under one Contract and that the Owner shall have the right to include such item or items as the Owner may deem to be in the best interests of the Owner.

THAT: On being awarded the Contract, the Bidder shall execute a Performance Bond and a Payment Bond, on the forms included herein, each equal to one hundred percent (100%) of the Awarded Contract Price (Contract Sum), as security for the faithful performance of the Contract.

THAT: The Bidder shall submit, in the blank spaces provided, all data, guarantees and other information called for.

THAT: The Bidder shall submit, herewith, drawings, or cuts and Specifications showing and describing in detail the equipment and/or apparatus which the undersigned proposes to furnish.

THAT: This Proposal shall be signed and submitted in the manner prescribed in the Instructions to Bidders.

THAT: Should this Proposal not be accepted by the Owner, the certified check, in the amount of (must be dollar amount): _____ Dollars (\$ _____) or the five percent (5%) Bid Bond, as applicable, deposited herewith shall be returned to the Bidder.

THAT: Should this Proposal be accepted by the Owner and the Bidder fail or neglect to execute the Contract and furnish the required Bonds within fifteen (15) days after receiving notifications of the acceptance of the Proposal and/or receipt of the formal Contract and Bond forms, the certified check, in the amount of (must be dollar amount): _____ Dollars (\$ _____), or the Bid Bond, deposited herewith shall be retained by the Owner as liquidated damages, it being understood that the Owner reserves the right to extend the time allowed for executing the Contract and/or furnishing the Bond in its sole discretion.

[Terms continued on the following page.]

THAT: The Bidder shall complete such Contract as may be entered into within the number of consecutive calendar days specified in the Contract from the date of the Notice to Proceed.

THAT: The Bidder proposes to enter into a Contract in accordance with this Proposal, the Plans and Specifications and the Contract Documents included herein, for the prices shown on the following pages.

THAT: The Bidder shall be required to submit a complete detailed itemized unit cost breakdown of the Bid Items on the Itemized Bid Proposal form along with a computed Lump Sum Bid Price amount with this proposal.

THAT: It is the intent of these Contract Documents to obtain a Contract based on Unit Prices with project awarded based upon the lowest qualified total bid based upon unit prices applied to the estimated quantities. Where a discrepancy exists between words and numbers in the Bid amount, the written words shall govern. Where a discrepancy exists between unit prices and mathematical computations in the Itemized Proposal, the unit prices and quantities in the Itemized Proposal shall govern.

THAT: The successful bidder shall have all proper Bidder licenses and privilege licenses required under North Carolina state laws governing their respective trade(s).

THAT: Notice to Proceed and project available shall occur within 60 days of award of contract by the Town Council.

BID PROPOSAL
GENERAL CONSTRUCTION
FOR THE
Main Street Sidewalk Connector,
TIP Number BL-0052, TOHS Project Number 22-007
(the "Project")

ITEMIZED PROPOSAL

The attached itemized list of work items and materials shall be made a part of this contract along with the completed price per unit of work item. The itemized bid proposal shall consist of the full completion of this list supplemented with any work item the contractor deems necessary to complete the project.

TOTAL "BID" PRICE for the construction of the Project complete as indicated by the Contract Documents (in words and figures):

_____ Dollars
and _____ Cents (\$_____)

Bidder _____
(Print)

NOTE: PROPOSAL SIGNATURE REQUIRED ON PAGE 00300-6. ALL PROPOSALS MUST BE PROPERLY EXECUTED TO BE CONSIDERED A VALID BID.

CERTIFIED LIST OF EQUIPMENT/MATERIAL MANUFACTURERS

The Bidder, as part of the procedure for the submission of Bids on the Project, submits the following list of Equipment/Materials Manufacturers to be used in the performance of work to be done on said Project. The list of Manufacturers and all equipment/materials furnished shall be based on requirements of the Contract Documents. Changes to this list after the Bid opening shall only be as approved by the Owner upon request by the Bidder or as required by the Owner based upon review of Bidder's submittals:

<u>EQUIPMENT/MATERIALS</u>	<u>MANUFACTURER</u>

It is understood and agreed that, if awarded a Contract, the Bidder shall not make any additions, deletions or substitutions to this certified list without the consent of the Owner. Failure to identify a manufacturer for any or all of the items listed shall constitute an entry of one of the manufacturers listed in its respective technical specification.

CERTIFICATION AFFIDAVIT

THE ABOVE INFORMATION IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER UNDERSTAND AND AGREE THAT, IF AWARDED A CONTRACT, THIS CERTIFICATION SHALL BE ATTACHED THERETO AND BECOME A PART THEREOF.

[If Bidder is not an individual, enter entity name here]

By: _____
(Signature)

NAME OF SIGNER: _____
(Please Print or Type)

TITLE OF SIGNER: _____
(Please Print or Type)

DATE: _____

BID SECURITY:

Accompanying this Proposal is a (1)_____ in the amount of
(2)_____ Dollars
(\$_____).

NOTE: (1) Insert the words "bank draft," "certified check," "bid bond", "cash", or "cashiers check", as the case may be.

(2) Amount must be equal to at least five percent (5%) of the total Bid.

BIDDER'S LICENSE:

The Bidder certifies that (he/she/it) is licensed as a Bidder under the specific North Carolina state law regulating his/her/its particular trade and that the number of the license under which he/she/it now operates is_____.

BIDDER'S CERTIFICATION AS TO ORGANIZATION AND AUTHORITY:

The Bidder certifies that the Affidavit of Organization and Authority, like the other documents attached hereto, form an integral part of the Proposal, and the Bidder acknowledges that the Owner will rely on the information provided therein in reviewing the Proposal and awarding a Contract.

LIQUIDATED DAMAGES:

The Bidder agrees, further, that the Owner may retain those amounts indicated in the Contract from the amount of compensation due the Bidder, under the terms of the Contract, for each and every day that the work remains incomplete and/or unsatisfactory beyond the completion date(s) specified in the Notice to Proceed. This amount is agreed upon as the proper measure of liquidated damages the Owner will sustain, per day, by the failure of the Bidder to complete the work within the stipulated time, and it is not to be construed in any sense as a penalty.

The Bidder shall not have or bring a claim against the Owner, or raise as a defense against the imposition of liquidated damages, other construction purportedly impeding Bidder's progress or timely project completion.

(SIGNATURE PAGE)

Dated _____, 20__.

Bidder—Legal Entity (SEAL)

By: _____ (SEAL)
(SIGN HERE)

SEAL-if corporation

Printed Name

Address

() _____
Telephone No.

Subscribed and sworn to before me this ____ day of _____, 20__

Notary Public

My Commission Expires:

BID BOND

This is a Bid Bond that is subject to the provisions of Article 3 of Chapter 44A of the North Carolina General statutes.

This Bid Bond is executed on _____, 20__.

The name of the PRINCIPAL is _____ (1)

_____ (2)

The name of the SURETY is _____

The TOWN OF HOLLY SPRINGS, NORTH CAROLINA is the OWNER.

The amount of the Bond is _____

_____ (Dollars) (\$_____)

KNOW BY ALL MEN BY THESE PRESENTS, the Principal and Surety above named are hereby held and firmly bound unto the above named OWNER hereinafter called the OWNER in the penal sum of the amount stated above in lawful money of the United States, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to the OWNER a certain Bid Proposal, attached hereto and hereby made a part hereof to enter into a Contract in writing, for the construction of:

Main Street Sidewalk Connector, TIP Number BL-0052, TOHS Project Number 22-007–
Holly Springs, NC as described by a document entitled “Project Manual for Main Street
Sidewalk Connector, TIP Number BL-0052, TOHS Project Number 22-007” dated, Wednesday
September 2nd, 2026 by the Town of Holly Springs

NOW, THEREFORE

- (a) If said Bid Proposal shall be rejected; or in the alternate,
- (b) If said Bid Proposal shall be accepted and the Principal shall execute and deliver a Contract in the form of Contract attached hereto (properly completed in accordance with said Bid Proposal) and shall furnish a bond for his faithful performance of said Contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid Proposal, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bid Bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid Proposal; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

ATTEST:

(Principal) Secretary
(SEAL)

Principal

BY: _____ (3)

(Address)

Witness as to Principal

(Address)

ATTEST:

N. C. Resident Agent
(SEAL)

Surety

By: _____

(4)

(Name)

(Address)

(Phone Number)

Witness as to Surety

(Address)

- (1) Insert the correct name of Principal.
- (2) Insert whether the Principal is a corporation, a partnership, a limited liability company or an individual.
- (3) If Principal is a partnership, all partners should execute the Bid Bond. If Bidder is a limited liability company, all managers (or all members, if the company is member-managed) should execute the Bond.

- (4) Provide contact name, address and phone number for bid bond surety.

POWER OF ATTORNEY
(Attach)

BIDDER'S CERTIFICATES
AFFIDAVIT OF ORGANIZATION AND AUTHORITY
SWORN STATEMENT

STATE OF _____)

COUNTY OF _____)

_____ being first duly sworn on oath deposes and says that the Bidder on the attached Bid Proposal is organized as indicated below and that all statements herein made are made on behalf of such Bidder and that this deponent is authorized to make them.

(Fill Out Applicable Paragraph)

CORPORATION:

The Bidder is a corporation organized and existing under the laws of the State of _____, it operates under the legal name of _____, and the full names of its officers are as follows:

President	_____
Secretary	_____
Treasurer	_____
Manager	_____

and it does _____ have a corporate seal. The _____ is/are authorized to sign construction proposals and contracts for the company by action of its Board of Directors taken _____, a certified copy of which is hereto attached. (Strike out this last phrase if not applicable.)

PARTNERSHIP:

The Bidder is a [limited/general] partnership consisting of individual/corporate partners as follows:

<u>General Partners</u>	<u>Limited Partners</u>
_____	_____
_____	_____
_____	_____

The partnership does business under the name of : _____

LIMITED LIABILITY COMPANY:

The bidder is a [member-managed/manager-managed] limited liability company consisting of the following individual/corporate members/managers:

<u>Managers</u>	<u>Members</u>
_____	_____
_____	_____
_____	_____

INDIVIDUAL:

The Bidder is an individual whose full name is:

and if operating under a trade name, said trade name is as follows:

The business address of the Bidder is:

Its phone number is: _____

The contact person for this Proposal is:

Bidder

By: _____

Subscribed and sworn to before me this _____ day of _____, 20__.

Notary Public

County

My Commission Expires:

EQUAL EMPLOYMENT OPPORTUNITY ADDENDUM

During the performance of the Contract the Bidder agrees as follows:

- a. The Bidder shall not discriminate against any employee or applicant because of race, color, religion, sex, or national origin. The Bidder shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to race, color, religion, sex, or national origin. Such action shall include but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Bidder agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of the nondiscrimination clause.
- b. The Bidder shall, in all solicitations or advertisements for employees placed by or on behalf of the Bidder, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- c. The Bidder shall send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract understanding, a notice, to be provided, advising the labor union or worker's representative of the Bidder's commitments under the Equal Employment Opportunity Section of the Contract, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- d. In the event of the Bidder's noncompliance with the nondiscrimination clauses of the Contract or with any of such rules, regulations, or orders, the Contract may be canceled, terminated, or suspended in whole or in part and the Bidder may be declared ineligible for further OWNER contracts.
- e. The Bidder will include the provisions of this Addendum in every subcontract or purchase order unless exempted by rules, regulations, or orders of the OWNER so that such provisions will be binding upon each Subcontractor or vendor.

(Use the following form for execution by a CORPORATION):

ATTEST: _____
(Assistant) Secretary

_____ Corporate Name

BY: _____
(Vice) President

(CORPORATE SEAL)

(Use the following form for execution by a PARTNERSHIP):

_____ (SEAL)
Partnership Name

BY: _____ (SEAL)
General Partner

(Use the following form for execution by a LIMITED LIABILITY COMPANY):

_____ (SEAL)
Company Name

BY: _____ (SEAL)
Manager/Member

(Use the following form for execution by an INDIVIDUAL):

BY: _____ (SEAL)

WITNESS:

Subscribed and sworn to before me this _____ day of _____, 20__.

_____ Notary Public

_____ County

My Commission Expires:

**AFFIDAVIT OF
STATEMENT OF NON-COLLUSIVE**

State of _____)
County of _____) ss.

_____ being first duly sworn,
deposes and says that:

- (1) He/she is the _____
(Owner, Partner, Officer, Representative or Agent)
of _____, the BIDDER that has
submitted the attached BID PROPOSAL;
- (2) He is fully informed respecting the preparation and contents of the attached BID PROPOSAL and of all pertinent circumstances respecting such BID PROPOSAL;
- (3) Such BID PROPOSAL is genuine and is not a collusive or sham BID PROPOSAL;
- (4) Neither the said BIDDER nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other BIDDER, firm, or person to submit a collusive or sham BID PROPOSAL in connection with the Contract for which the attached BID PROPOSAL has been submitted; or to refrain from bidding in connection with such Contract; or have in any manner, directly or indirectly, sought by agreement or collusion, or communication, or conference with any BIDDER, firm, or person to fix the price or prices in the attached BID PROPOSAL or of any other BIDDER, or to fix any overhead, profit, or cost elements of the BID PROPOSAL price or the BID PROPOSAL price of any other BIDDER, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against The Town of HOLLY SPRINGS, or any person interested in the proposed Contract;
- (5) The price or prices quoted in the attached BID are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the BIDDER or any other of its agents, representatives, owners, employees or parties in interest, including this affidavit.

BIDDER

BY _____

ITS _____
(Title)

Subscribed and sworn to before me this _____ day of _____, 20__.

My commission expires _____
END OF AFFIDAVIT

Town of Holly Springs

AFFIDAVIT A

AFFIDAVIT of Intent to Perform Contract with Own Workforce.

County of Wake

Affidavit of _____
(Name of Bidder)

I hereby certify that it is our intent to perform a minimum of _____ % of the work required for the

_____ contract.
(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract substantial elements of work for this type project, and normally performs and has the capability to perform and will perform substantial elements of the work on this project with his/her own current work forces; and

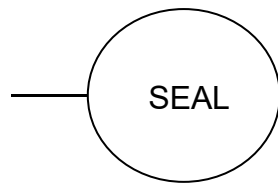
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ **Name of Authorized Officer:** _____

Signature: _____

Title: _____



State of North Carolina, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

NONDISCRIMINATION CLAUSE

It is specifically agreed as part of the consideration of the signing of this Bid Proposal, and the resulting execution of a Contract, that the parties hereto, their agents, officials, employees or servants shall not discriminate in any manner on the basis of age, handicap, race, color, creed, gender, religious affiliation, or national origin with reference to the subject matter of the Contract, no matter how remote.

This provision, being incorporated for the benefit of the Town of HOLLY SPRINGS and its residents, may be enforced as set out in the ordinances of the Town of HOLLY SPRINGS, enforcement of this provision shall be by action for specific performance, injunctive relief, or other remedy as by law provided.

This provision shall be binding on the successors and assigns of the parties hereto with reference to the subject matter of the Contract.

(Use the following form for signatures by a CORPORATION):

ATTEST:	_____ Corporate Name
_____ (Assistant) Secretary	BY: _____ (Vice) President
_____ (Printed Name)	_____ (Printed Name)
(Corporate Seal)	

(Use the following form for signatures by a PARTNERSHIP):

_____ WITNESS	_____(SEAL) Partnership Name
_____ (Printed Name)	BY: _____(SEAL) General Partner

(Use the following form for signatures by a LIMITED LIABILITY COMPANY):

_____	_____ (SEAL)
WITNESS	Company Name
_____	BY: _____ (SEAL)
(Printed Name)	Manager/Member

(Use the following form for signatures by an INDIVIDUAL):

_____	_____ (SEAL)
_____	_____
_____	(Printed Name)
WITNESS	

(Printed Name)	

Subscribed and sworn to before me this _____ day of _____, 20__.

_____	_____
Notary Public	County

My Commission Expires:

NOTICE OF AWARD

TO: CONTRACTOR/BIDDER: _____

ADDRESS: _____

FROM: _____

OWNER: Town of HOLLY SPRINGS
Utilities & Infrastructure Services Department
HOLLY SPRINGS, North Carolina

PROJECT:

**Main Street Sidewalk Connector,
TIP Number BL-0052, TOHS Project Number 22-007**

You are hereby notified that the Owner has considered the Bid Proposal submitted by you for the above-described project in response to its Notice to Bidders dated _____.

It appears that it is to the best interest of said Owner to accept your Bid Proposal in the amount of: _____

Dollars (\$_____). You are therefore hereby notified that your Bid Proposal has been accepted for _____

The Bidder is required by as a condition of its Award of the Contract to execute and deliver the formal Contract with the Owner and to furnish the required Bidder's Performance and Payment Bonds within fifteen (15) days from the date of the delivery of this Notice to you.

If you fail to execute said Contract and to furnish said Bonds within fifteen (15) days from the date of delivery of this Notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your Bid Proposal as abandoned and to award the work covered by your Bid Proposal to another bidder, or to readvertise the work or otherwise dispose thereof as the Owner may see fit.

Dated this _____ day of _____, 20____.

Town of HOLLY SPRINGS, North Carolina

By: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged this _____ day of _____, 20____.

Bidder

By: _____

Title: _____

- END OF SECTION 00300 -

SECTION 00500
AGREEMENT (CONTRACT)

**INSTRUCTIONS TO CONTRACTORS AND
REQUIREMENTS AS TO FORM FOR TOWN OF HOLLY SPRINGS, NC AGREEMENTS**

DO NOT REMOVE FROM AGREEMENT

Please observe the following in executing the attached Agreement:

1. The Owner may contract with four types of legal entities.
 - (a) If the Agreement is with an individual, that individual should sign the Agreement exactly as his/her name is set out. If the Agreement is with an individually-owned business, the Agreement should be with the individual owner, and not the named business.
 - (b) Execution on behalf of a corporation should be by the president or a vice president, attested by the corporate secretary, with the corporate seal affixed. An official other than president or vice president should attach documentation of his/her authority to execute and bind the corporation.
 - (c) If the Agreement is with a partnership, all general partners of the partnership should execute the Agreement unless an authorized partner is designated to execute, in which case documentation of such authorization should be attached.
 - (d) If the Agreement is with a limited liability company, all managers of the limited liability company should execute the Agreement. If the limited liability company is member-managed, all members should sign the Agreement. If only certain manager(s) or member(s) of the limited liability company are authorized to execute the Agreement, documentation of such authorization should be attached.
2. After signing the Agreement, the appropriate notary's acknowledgement, in the individual, corporate or partnership form should be completed.
3. The Performance Bond and Payment Bond should be attached to the Agreement package. They should be signed by the Contractor, and its signature should be acknowledged with the appropriate acknowledgement form. Next, the Bonds, in approved form, must be signed by the authorized agent of the Surety Company issuing the Bonds, and an executed Power of Attorney document authorizing the agent to sign must accompany the Bond Documents.
4. The Agreement and Bonds should not be dated, except by the last person executing the Agreement, normally the Town Clerk.
5. The Bid Form and all other documents submitted with the Bid shall be included with the Agreement.
6. Bid Proposal: Complete the Acceptance of Notice section on the last page of this document.
7. Page 00500-3: Fill in the Contractor name and address.

8. Pages 00500-6 through 00500-9: Choose the appropriate signature page and complete it in its entirety.
9. Pages 00500-10 through 00500-15: Complete in their entirety.
10. Page 00500-17: Certificate of Insurance. The General Conditions of the Contract, as modified by the Supplementary Conditions and the Special Conditions, require the Certificate of Insurance to include the Indemnification Agreement on the reverse side of the Certificate. All parties required to be named as additional insured parties by the Contract Documents in connection with the attached Agreement shall be named on the Certificate of Insurance for each policy.
11. Most Certificates of Insurance state under the cancellation clause that “the issuing company will endeavor to mail 30 days written notice to the ...” and “but failure to mail such notice shall impose no obligation or liability of any kind upon the Company, its agents or representatives”. If your certificate states this, the words “endeavor to” and “but failure to mail such notice shall impose no obligation or liability of any kind upon the Company, its agents or representatives” must be stricken in order to comply with the Contract Documents.
12. Four copies of the Agreement are sent to the Contractor. The original and duplicates should be signed and returned to the Engineer or Architect for signature by the Owner, after which one duplicate will be returned to the Contractor and one copy will be sent to the Contractor’s Bonding Company(ies).
13. Failure to fully complete all four sets of the Agreement will cause delays in the approval by the Owner and therefore delay the issuance of the Notice to Proceed.

AGREEMENT

This Agreement (the "Agreement") is made this ____ day of _____, in the year 20____, by and between the Town of Holly Springs, North Carolina, (the "Owner") and _____ of _____, (the "Contractor").

WITNESSETH

THAT, WHEREAS, an Award of Contract (the "Award") for:

Main Street Sidewalk Connector, TIP Number BL-0052, TOHS Project Number 22-007

The Town of Holly Springs proposes to add approximately 1200' of sidewalk along the east side of N. Main Street from Trellis Pointe Drive to Arbor Creek Drive in Holly Springs, NC. The project includes the removal of soil and rock from the existing roadside and installation of a roadside ditch and guiderail.

as prepared by the Town of Holly Springs. (hereinafter called "Engineer's Consultant"), has recently been awarded to the Contractor by the Owner.

AND WHEREAS, the work to be performed by the Contractor or its subcontractors, and the labor, materials, equipment, apparatus, and supplies to be provided in connection therewith (collectively, the "Work") is more particularly described in the Proposal (the "Proposal") attached hereto.

AND WHEREAS, the aggregate cost of the Work (referred to as either the "Contract Price" or the "Contract Sum") and the individual prices and rates of the various components of the Work that together comprise the Contract Price, are more particularly described in the Proposal.

AND WHEREAS, it was one of the conditions of said Award that a formal contract should be executed by and between the Owner and the Contractor, evidencing the terms of said Award.

NOW THEREFORE, THIS AGREEMENT FURTHER WITNESSETH THAT the Owner and the Contractor represent, warrant, covenant and agree as follows:

It is agreed and understood that the terms and conditions of the following documentation of are a part of and parcel to this Agreement to the same extent as if incorporated herein in full:

Project Manual for Project No. **Main Street Sidewalk Connector, TIP Number BL-0052, TOHS Project Number 22-007**; Standard General Conditions of the Construction Contract (EJCDC Document No. 1910-8, 1996 edition), as amended, revised, and supplemented by the Supplementary Conditions (the "Supplementary Conditions") and the Special Conditions (the "Special Conditions") thereto (as so amended, revised and supplemented, the "General Conditions") or 2012 NCDOT Standard Specifications for Roads and Structures.

The Contractor hereby covenants and agrees with the Owner that it will, for a sum equal to the Contract Price, well and faithfully perform, provide and execute the Work in accordance with each and every one of the conditions, covenants, stipulations, terms and provisions contained in the Notice to Bidders/Invitation to Bid, the Instructions to Bidders, the Proposal, the Plans, the Specifications, the

General Conditions and the Contract Documents (as that term is defined in the General Conditions), all of which are a part of and parcel to this Agreement to the same extent as if incorporated herein in full.

And the Owner does hereby covenant and agree with the Contractor that it will pay to the Contractor, when due and payable under the terms of the Contract Documents and the Award, the Contract Price, and that it will well and faithfully comply with and perform each and every obligation imposed upon it by said Contract Documents and the terms of said Award.

The Contractor shall commence the Work on the commencement date specified in a written order of the Owner (the "Notice to Proceed"). The Work shall be **finally and fully completed in the manner and times described in Table 1 below**, so that it is ready for final payment, as evidenced by the Engineer's or the Architect's written recommendation. In the event that the Work is not completed to the standards and degrees required by the Contract Times, or either of them, liquidated damages shall be assessed against the Contractor for each day of delay as described herein below.

LIQUIDATED DAMAGES

The parties recognize and acknowledge that Owner will suffer financial losses if the Work is not completed as required within the Contract Times. They also recognize and acknowledge that the damages caused by the contractor's delays are difficult to ascertain and that the expense and difficulty to both parties in proving or contesting the amounts of those losses would be substantial. Instead of requiring proof of those amounts, it is agreed that Contractor shall be liable for and shall pay owner the following amounts under owner's damages, and engineering charges, all as liquidated damages, and not as a penalty in the event the Work remains incomplete at the end of the contract time specified in the Notice to Proceed.

The Contractor agrees further that the Owner may retain those amounts indicated below from the amount of Compensation due the Contractor for each day that the work remains incomplete beyond the completion date specified in the Notice to Proceed. Payment by the Owner to the Contractor in lieu of retainage does not constitute a waiver by the Owner. This amount is agreed upon as the proper measure of liquidated damages the Owner will sustain, per day, by the failure of the undersigned to complete the work within the stipulated time, and it is not to be construed, in any sense, as a penalty. The parties agree this is a reasonable amount.

No Contractor shall have a claim against the Owner as a result of a third party's lack of progress or project completion.

The date of availability for this contract is **upon written notice to proceed**.

The completion date for this contract is **180 calendar days**.

The liquidated damages for this contract are **Six Hundred Dollars (\$600)** per calendar day.

Payment of the charges described herein shall not excuse or relieve the Contractor for any other liability under the Contract Documents for delay in the progress schedule of the Work, and all other penalties imposed on the Contractor and remedies available to the Owner under the Contract Documents shall remain in full force and effect.

IN WITNESS WHEREOF, said Contractor and Owner, being duly authorized, have caused these presents to be signed in their names as of the day and year first above written.

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

By: _____

Name: _____

Title: _____

ATTEST:

TOWN OF HOLLY SPRINGS,
a North Carolina municipality

By: _____

Name: Linda McKinney

Title: Town Clerk

By: _____

Name: Randy Harrington

Title: Town Manager

(SEAL)

CONTRACTOR:

(SEAL)

_____(SEAL)

_____(SEAL)

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public of _____ County,
State of _____, do hereby certify that _____
personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the _____ day of _____, 20__.

Notary Public

My Commission expires: _____

[OFFICIAL SEAL]

IMPORTANT

NOTE: If Contractor is an individual, his/her signature shall be placed above. The signature of the Contractor shall also be acknowledged before a Notary Public or other person authorized by law to execute such acknowledgment.

[OR: Contractor's Signature, if a corporation]

CONTRACTOR:

a _____ corporation

ATTEST:

Secretary
(SEAL)

By: _____
Name: _____
Title: _____ President

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public of _____ County, State of _____, do hereby certify that _____ personally came before me this day and acknowledged that he/she is _____ Secretary of _____, a _____ corporation, and that, by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its _____ President, sealed with its corporate seal, and attested by himself/herself as its _____ Secretary.

Witness my hand and official seal, this the _____ day of _____, 20__.

Notary Public

My Commission Expires: _____

[OFFICIAL SEAL]

IMPORTANT

NOTE: If the Contractor is a Corporation, the legal name of the Corporation shall be set forth above, together with the signature of the officer or officers authorized to sign Contracts on behalf of the Corporation. If the signature is by an agent other than an authorized officer of the Corporation, a Resolution must be attached hereto. The signature of the Contractor shall also be acknowledged before a Notary Public or other person authorized by law to execute such acknowledgment.

[OR: Contractor's Signature, if a partnership]

CONTRACTOR:

_____,
a [general/limited] partnership (SEAL)

By: _____ (SEAL)

Name: _____

Title: General Partner

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public of _____ County, State of _____, do hereby certify that _____, General Partner of _____, a _____ [general/limited] partnership, personally appeared before me this day and acknowledged the due execution of the foregoing instrument as his/her act and deed and as the act and deed of the partnership.

Witness my hand and official seal, this the _____ day of _____, 20__.

Notary Public

My Commission Expires: _____

[OFFICIAL SEAL]

IMPORTANT

NOTE: If Contractor is a partnership, the true name of the firm shall be set forth above, together with the signatures of all the general partners. If the signature is by an agent other than a general partner, a Resolution must be attached hereto. The signature of the Contractor shall also be acknowledged before a Notary Public or other person authorized by law to execute such acknowledgment.

[OR: Contractor's Signature, if a limited liability company]

CONTRACTOR:

_____,
a limited liability company (SEAL)

By: _____ (SEAL)

Name: _____

Title: Member/Manager

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public of _____ County, State
of _____, do hereby certify that _____ a
[Member/Manager] of _____, a _____ limited liability
company, personally appeared before me this day and acknowledged the due execution of the foregoing
instrument as his/her act and deed and as the act and deed of the company.

Witness my hand and official seal, this the _____ day of _____, 20____.

Notary Public

My Commission Expires: _____

[OFFICIAL SEAL]

IMPORTANT

NOTE: If Contractor is a limited liability company, the true name of the firm shall be set forth above, together with the signatures of all the managers. If the signature is by an agent other than all of the managers of the limited liability company (or all of the members, if the company is member-managed), a Resolution must be attached hereto. The signature of the Contractor shall also be acknowledged before a Notary Public or other person authorized by law to execute such acknowledgment.

PERFORMANCE BOND

This Bond is executed on _____, 20__.

The name of the PRINCIPAL is _____ (1)

a _____ (2)

The name of the SURETY is _____

The TOWN OF HOLLY SPRINGS, NORTH CAROLINA is the CONTRACTING BODY.

The amount of the Bond is _____
_____ Dollars (\$ _____)

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the above named CONTRACTING BODY, hereinafter called the "Contracting Body", in the penal sum of the amount stated above in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas, the Principal entered into a certain Agreement with the Contracting Body, dated the ____ day of _____, 20__ for work described by Plans and Specifications prepared by Town of Holly Springs, herein called and referred to as the "Engineers", a copy of said Agreement is hereto attached and made a part hereof for the construction of:

Main Street Sidewalk Connector, TIP Number BL-0052, TOHS Project Number 22-007 – Holly Springs, NC as described by a document entitled Project Manual for Main Street Sidewalk Connector, TIP Number BL-0052, TOHS Project Number 22-007, dated Wednesday, September 2nd 2026 by the Town of Holly Springs

NOW THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said Agreement during the original term of said Agreement and any extensions thereof that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any guaranty required under the Agreement, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said Agreement that may hereafter be made, notice of which modifications to the SURETY being hereby waived, then, this obligation is to be void; otherwise it shall remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

ATTEST:

(Principal) Secretary
(SEAL)

Principal

By: _____(3)

(Address)

Witness as to Principal

(Address)

Surety

By: _____(4)

(Name)

ATTEST:

(Address)

By: _____
[N.C. Resident Agent]
(SEAL)

(Phone Number)

Witness as to Surety

(Address)

NOTE: Date of Bond must not be prior to date of Agreement.

- (1) Insert the correct name of Contractor.
- (2) Insert whether the Contractor is a corporation, a partnership, a limited liability company or an individual.
- (3) If Contractor is a partnership, all general partners should execute the Bond. If Contractor is a limited liability company, all managers (or all members, if the company is member-managed) should execute the Bond .
- (4) Provide contact name, address and phone number for performance bond surety.

PAYMENT BOND

This Bond is executed on _____, 20__.

The name of the PRINCIPAL is _____(1)

a _____(2)

The name of the SURETY is _____

The TOWN OF HOLLY SPRINGS, NORTH CAROLINA is the CONTRACTING BODY.

The amount of the Bond is _____
_____ Dollars (\$ _____)

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the above named CONTRACTING BODY, hereinafter called the "Contracting Body", in the penal sum of the amount stated above in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas, the Principal entered into a certain Agreement with the Contracting Body, dated the ____ day of _____, 20__ for work described by Plans and Specifications prepared by Town of Holly Springs, herein called and referred to as the "Engineers", a copy of said Agreement is hereto attached and made a part hereof for the construction of:

Main Street Sidewalk Connector, TIP Number BL-0052, TOHS Project Number 22-007– Holly Springs, NC as described by a document entitled Project Manual for Main Street Sidewalk Connector, TIP Number BL-0052, TOHS Project Number 22-007, dated Wednesday, September 2nd 2026 by the Town of Holly Springs

NOW THEREFORE, if the Principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said Agreement, and any and all duly authorized modifications of said Agreement that may hereafter be made, notice of which modifications to the SURETY being hereby waived, then this obligation is to be void; otherwise it shall remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

ATTEST:

(Principal) Secretary
(SEAL)

Principal

By: _____(3)

(Address)

Witness as to Principal

(Address)

Surety

By: _____(4)

(Name)

(Address)

(Phone Number)

ATTEST:

By: _____
[N.C. Resident Agent]
(SEAL)

Witness as to Surety

(Address)

NOTE: Date of Bond must not be prior to date of Agreement.

- (1) Insert the correct name of the Contractor.
- (2) Insert whether the Contractor is a corporation, a partnership, a limited liability company or an individual.
- (3) If Contractor is a partnership, all general partners should execute the Bond. If Contractor is a limited liability company, all managers (or all members, if the company is member-managed) should execute the Bond.
- (4) Provide contact name, address and phone number for payment bond surety.

STATE OF NORTH CAROLINA
E-VERIFY AFFIDAVIT
COUNTY OF WAKE TOWN OF HOLLY SPRINGS

NOW COMES Affiant, first being sworn, deposes and says as follows:

1. I have submitted a bid for contract or desire to enter into a contract with the Town of Holly Springs;
2. As part of my duties and responsibilities pursuant to said bid and/or contract, I attest that I am aware of and in compliance with the requirements of E-Verify, Article 2 of Chapter 64 of the North Carolina General Statutes, to include (mark which applies):

___ After hiring an employee to work in the United States I verify the work authorization of said employee through E-Verify and retain the record of the verification of work authorization while the employee is employed and for one year thereafter; or

___ I employ less than twenty-five (25) employees in the State of North Carolina.

3. As part of my duties and responsibilities pursuant to said bid and/or contract, I attest that to the best of my knowledge any subcontractors employed as a part of this bid and/or contract are in compliance with the requirements of E-Verify, Article 2 of Chapter 64 of the North Carolina General Statutes, to include (mark which applies):

___ After hiring an employee to work in the United States the subcontractor verifies the work authorization of said employee through E-Verify and retain the record of the verification of work authorization while the employee is employed and for one year thereafter; or

___ Employ less than twenty-five (25) employees in the State of North Carolina.

Specify subcontractor: _____

This the _____ day of _____, 201__.

Affiant

Sworn to and subscribed before me, this the _____ day of _____, 2024.

[OFFICIAL SEAL]

_____, Notary Public

My Commission Expires: _____

AFFIDAVIT

(To be attached to all Agreements)

STATE OF)
) SS
COUNTY OF)

_____ being first duly sworn on oath deposes and says
that s/he is _____ (attorney-in-fact or agent) of
_____ (bonding company) surety on the attached Agreement on
_____ executed by
_____ (Contractor).

Affiant further deposes and says that no officer, official or employee of the Owner has any interest directly or indirectly, or is receiving any premium, commission fee or other thing of value on account of the same or furnishing of the Bond, undertaking or Contract of Indemnity, Guaranty, Suretyship in connection with the above mentioned Agreement.

Signed _____

Subscribed and sworn to before me this ____ day of _____, 20__.

(Notary Public, _____ County, _____)

My Commission Expires _____

RESOLUTION OF CONTRACTOR'S PARTNERS, MANAGERS OR MEMBERS

(Attach if necessary)

CERTIFICATE OF INSURANCE

(Attach)

[See the General Conditions for specific requirements.]

NOTICE TO PROCEED

TO: CONTRACTOR: _____

ADDRESS: _____

FROM: Kendra D. Parrish, PE, CFM
Executive Director
Utilities & Infrastructure Services

OWNER: Town of Holly Springs
P.O. Box 8
128 S. Main St.
Holly Springs, North Carolina 27540

PROJECT: **Main Street Sidewalk Connector – Holly Springs, NC**
PROJECT NO.: **22-007**

CONTRACT PRICE/SUM: \$ _____

You are hereby notified to commence Work on the referenced project on or before _____, 20__
(the “Commencement Date”), and are to finally and fully complete the Work within **180**
CONSECUTIVE CALENDAR DAYS of the Commencement Date. Your Contract final completion
date is therefore _____, 20__.

The Agreement provides for assessment of liquidated damages for each consecutive calendar day after the
above established completion date that the Work remains incomplete to the standard and degree required.

ENGINEER/ARCHITECT:

By: _____

Name: _____

Title: _____

Date: _____

- END OF SECTION 00500 -

SECTION 00510
ITEMIZED BID PROPOSAL

UNIT PRICES:

A unit price is an amount stated in the Construction Agreement as a price per unit of measurement for materials or service an shall be added to or deducted from the contract Sum by Change order in the event that a specific material and/or service provided by the Contractor is increased or decreased from the Estimated Quantity Bid in the Construction Agreement.

Unit prices are complete for labor, equipment, material, overhead and profit. Base Bid and Alternate Bid (if the Alternate Bid is Accepted) includes the quantity of each item to be furnished complete according to the work shown on the plans and specifications and as estimated herein, inclusive of all appurtenances, as shown and specified. Any unused amount will be credited to the Owner by change order at the end of the project. Likewise, any item installed and accepted by the Owner that exceed the Contract Quantity estimated for that particular Bid item will be paid to the Contractor by Change Order at the Progress Payment that follows approval of the installation of the additional work items.

Holly Springs Main Street Sidewalk Connector

<u>Description</u>	<u>Estimated Quantity</u>	<u>Unit</u>	<u>Price</u>	<u>Total Price</u>
Mobilization	1	LS	\$	\$
Construction Surveying	1	LS	\$	\$
Undercut Excavation	530	CY	\$	\$
Grading	1	LS	\$	\$
Geotextile for Soil Stabilization	200	SY	\$	\$
Asphalt Pavement Repair	150	Ton	\$	\$
Right-of-Way Markers	5	EA	\$	\$
2'-6" Concrete Curb and Gutter	70	LF	\$	\$
4" Concrete Sidewalk	690	SY	\$	\$
Concrete Curb Ramps	3	EA	\$	\$
Adjustment of Catch Basins	1	EA	\$	\$
Adjustment of Meter Boxes or Valve Boxes	2	EA	\$	\$
Steel Beam Guardrail	338	LF	\$	\$
Steel Beam Guardrail, Shop Curved	13	LF	\$	\$
Additional Guardrail Posts	5	EA	\$	\$
Guardrail End Units, Type AT-1	1	EA	\$	\$
Guardrail End Units, Type CAT-1	1	EA	\$	\$
Supports, 3 LB Steel U-Channel	14	LF	\$	\$
Sign Erection, Relocate Sign Typ. E (Ground Mounted)	1	EA	\$	\$
Disposal of Support, U-Channel	1	EA	\$	\$
Work Zone Signs (Stationary)	64	SF	\$	\$
Work Zone Signs (Portable)	144	SF	\$	\$
Portable Changeable Message Sign (Short Term)	120	DAY	\$	\$
Drums	40	EA	\$	\$
Cones	15	EA	\$	\$
Pedestrian Channelization Devices	16	LF	\$	\$
Flagger	150	DAY	\$	\$
Thermoplastic Pvmt. Marking Lines (24", 90 MILS)	298	LF	\$	\$

Foundation Conditioning Material, Minor Str.	10	TON	\$	\$
Foundation Conditioning Geotextile	30	SY	\$	\$
15" RC Pipe Culverts, Class III	44	LF	\$	\$
24" RC Pipe Culverts, Class III	16	LF	\$	\$
30" RC Pipe Culverts, Class III	12	LF	\$	\$
Endwall	3.4	CY	\$	\$
Masonry Drainage Structures	5	EA	\$	\$
Masonry Drainage Structures	5	LF	\$	\$
Frame with Two Grates, Std 840.24	2	EA	\$	\$
Frame with Cover, Std 840.54	2	EA	\$	\$
Geotextile for Drainage	75	SY	\$	\$
Temporary Silt Fence	1,270	LF	\$	\$
Erosion Control Stone, Class A	75	TON	\$	\$
Erosion Control Stone, Class B	110	TON	\$	\$
Sediment Control Stone	50	TON	\$	\$
Temporary Mulching	2	ACR	\$	\$
Seed for Temporary Seeding	200	LB	\$	\$
Fertilizer for Temporary Seeding	2	TON	\$	\$
Temporary Slope Drains	200	LF	\$	\$
Safety Fence	260	LF	\$	\$
Silt Excavation	300	CY	\$	\$
Matting for Erosion Control	1,945	SY	\$	\$
Special Stilling Basins	1	EA	\$	\$
1/4" Hardware Cloth	10	LF	\$	\$
Low Permeability Geotextile	100	SY	\$	\$
Wattle	180	LF	\$	\$
Flocculant	40	LB	\$	\$
2" Skimmer	1	EA	\$	\$
Seeding and Mulching	3	ACR	\$	\$
Mowing	3	ACR	\$	\$
Seed for Repair Seeding	50	LB	\$	\$
Fertilizer for Repair Seeding	0.25	TON	\$	\$
Seed for Supplemental Seeding	75	LB	\$	\$
Fertilizer Topdressing	2	TON	\$	\$
Specialized Hand Mowing	10	MHR	\$	\$
Concrete Washout Structure	1	EA	\$	\$
6" Valve	1	EA	\$	\$
Fire Hydrant	1	EA	\$	\$
Fire Hydrant Leg	20	LF	\$	\$
Remove Fire Hydrant	1	EA	\$	\$
Total for Base Bid	\$			

[If Bidder is not an individual, enter entity name here]

By: _____
(Signature)

NAME OF SIGNER: _____
(Please Print or Type)

TITLE OF SIGNER: _____
(Please Print or Type)

DATE: _____

- END OF SECTION 00510 -

SECTION 00900
APPLICATIONS FOR PROGRESS PAYMENT
**FOR PAYMENT APPLICATIONS – 1 COMPLETE SET IS TO BE SUBMITTED TO THE
TOWN, ATTN: DEBBIE ABBENE (Debbie.Abbene@hollyspringsnc.gov)**

**PAYMENT APPLICATIONS ARE TO BE SUBMITTED EVERY MONTH FOR PAYMENT
NCDOT PROJECTS FORM DBE-IS TO BE INCLUDED IN PAYMENT APPLICATION**

Each Application for progress payment must include, as a minimum, the following information:

1. Pay Request cover letter as included on page 00900-2.
2. Town of Holly Springs Cover Sheet as included on page 00900-3.
3. Itemized quantity sheet(s) as included on page 00900-4.
4. A Certificate of Sales Tax Paid as included on page 00900-5.
If no sales tax has been paid in the period, then a certificate should be included stating that no sales tax was paid.
5. Updated schedule.
6. Form DBE-IS if NCDOT Project
7. Subcontractor Payment Report on page 00905-6.
8. Five full sets of the above information.
9. A progress schedule updated to reflect current status of project. If project is still on a previously submitted schedule, submit another copy of the schedule with “No Change” noted, along with the date of submittal.
10. S&EC Rain Event Logs
11. S&EC Self Inspection Logs

PAY REQUEST COVER LETTER

(To Be Submitted)

DATE: _____

TO: Town of Holly Springs

RE: _____

We hereby certify that the labor and materials listed on this request for payment have been used in the construction of this Work, or that all materials included in this request for payment and not yet incorporated into the construction are now on the site or stored at an approved location with proper insurance to protect these stored materials; and that all lawful charges for labor, materials and the like, covered by previous Certificates of Payment have been paid and that all other lawful charges on which this request for payment is based have been paid for in full or will be paid for in full from the funds received in payment of this request within ten (10) calendar days from receipt of this partial payment from the OWNER.

CONTRACTOR: _____

BY: _____

TIME: _____

State of _____
County of _____

Sworn to and subscribed before me this _____ day of _____, 20__.

Notary Public (Seal)

My Commission Expires

APPLICATION FOR PAYMENT

Town of Holly Springs, North Carolina

Project _____

Contractor _____

Project No. _____

Period _____

Payment No. _____

The undersigned Contractor certifies that to the best of its knowledge and belief, all items, units, quantities and prices of all work and material indicated on sheet(s) _____ of this periodic estimate are correct; that all Work has been performed and Materials supplied in full accordance with the terms and conditions of the construction Contract Documents between the undersigned as Contractor and the Town of Holly Springs as Owner, dated _____, and all authorized changes thereto; that the following is a true and correct statement of the Contract amount up to and including the last day of the period covered by this estimate; and that no part of the "Total Amount Due" has been received.

Total Contract Amount, Including Change Orders _____

Total Amount Earned, To Date _____ % Earned

5% Retainage _____

Total Earned Less Retainage _____

Total Previously Approved _____

Amount Due This Estimate _____

Unpaid From Previous Estimate _____

Current Amount Due _____

Balance to Finish, Including Retainage _____

The Contractor further certifies that all claims outstanding as of this date against the undersigned as Contractor for labor, materials, and expendable equipment employed in the performance of said Contract up to the date of this estimate have been paid in full accordance with the requirements of this Contract.

CONTRACTOR _____ BY _____ TITLE _____ DATE _____

APPROVAL FOR PAYMENT:

Resident Project Representative _____

Engineer/Architect _____

Town of Holly Springs – Owner's Representative _____

Project No. 22-007

TIP No. BL-0052

00900-3

Main Street Sidewalk Connector

CERTIFICATE OF SALES TAX PAID

PAYMENT NO. 1

PROJECT _____ OWNER - TOWN OF HOLLY SPRINGS, WAKE COUNTY, NORTH CAROLINA
CONTRACTOR _____ FOR PERIOD _____ TO _____

VENDOR	ADDRESS	INVOICE #	DATE	AMOUNT	NC TAX	COUNTY	TRANSIT TAX	COUNTY TAX
TOTALS								

I hereby certify that the above listed vendors were paid sales tax upon purchases of building materials during the period covered by this construction estimate, and the property upon which such taxes were paid was or will be used in the performance of this Contract. No tax on purchases or rentals of tools and/or equipment is included in the above list. All of the materials listed above became a part of or are annexed in the above referenced construction project.

By _____ Signature _____ Title _____

_____ being duly sworn, certifies that the foregoing statement of sales taxes paid in connection with the referenced Contract is true to the best of his or her knowledge and belief.

Sworn to before me this _____ day of _____, 20__.

My commission expires _____, 20__.

Notary Public _____

State of North Carolina
Department of Transportation
Subcontractor Payment Information

Submit with Invoice to: **Town of Holly Springs**
P O Box 8
Town of Holly Springs, NC 27540

Firm Invoice No. Reference: _____

NCDOT PO/Contract Number: _____

WBS No. (State Project No.): _____

Date of Invoice: _____

Signed: _____

Invoice Line Item Reference	Payer Name	Payer Federal Tax ID	Subcontractor/Sub consultant/Materi al Supplier Name	Subcontractor/Subc onsultant/Material Supplier Federal Tax ID	Amount Paid to Subcontractor/Subcon sultant/Material Supplier This Invoice	Date Paid To Subcontractor/Subconsul tant/Material Supplier This Invoice

Total Amount Paid to Subcontractor Firms \$ _____

NOTE: These documents are scanned into our Fiscal program. Please do not highlight or shade the figures.

Rev. 12/05

FIELD ORDER

FIELD ORDER NO.: _____

DATE: _____

PROJECT: _____

RE: _____

TO CONTRACTOR: This Field Order is issued to interpret/clarify the Contract Documents, order minor changes in the work, and/or memorialize trade-off agreements. Both parties hereby agree that the work described by this Field Order is to be accomplished without change in Contract Sum or Price, Contract Time or Times, and/or claims with other costs.

DESCRIPTION: _____

ATTACHMENTS: _____

REFERENCES: _____

RECOMMENDED:

By: _____
Inspector
(Authorized Signature)

Date: _____

APPROVED:

By: _____
Development Inspection Administrator
or Senior Engineer
(Authorized Signature)

Date: _____

ACCEPTED:

By: _____
Contractor
(Authorized Signature)

Date: _____

Distribution: Project Inspector
Lead Inspector
Project Engineer
Director of Engineering/Town Engineer
Contractor

WORK CHANGE DIRECTIVE INSTRUCTIONS

A. GENERAL INFORMATION

This document was developed for use in situations involving changes in the Work which, if not processed expeditiously, might delay the Project. These changes are often initiated in the field and may affect the Contract Sum or Price or the Contract Time or Times. This is not a Change Order, but only a directive to proceed with Work that may be included in a subsequent Change Order.

For supplemental instructions and minor changes not involving a possible change in the Contract Sum or Price or the Contract Time or Times, a Field Order instead shall be used.

B. COMPLETING THE WORK CHANGE DIRECTIVE FORM

Engineer or Architect initiates the form, including a description of the items involved and attachments.

Based on conversations between Engineer or Architect and Contractor, Engineer or Architect completes the following:

METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT SUM OR PRICE: Mark the method to be used in determining the final cost of Work involved and the estimated net effect on the Contract Sum or Price. If the change involves an increase in the Contract Sum or Price and the estimated amount is reached before the additional or changed Work is completed, another Work Change Directive must be issued to change the estimated price or Contractor may stop the changed Work when the estimated price is reached. If the Work Change Directive is not likely to change the Contract Sum or Price, the space for estimated increase (decrease) should be marked "Not Applicable."

METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT TIME OR TIMES: Mark the method to be used in determining the change in Contract Time or Times and the estimated increase or decrease in Contract Time or Times. If the changes involves an increase in the Contract Time or Times and the estimated times are reached before the additional or changed Work is completed, another Work Change Directive must be issued to change the times or Contractor may stop the changed Work when the estimated times are reached. If the Work Change Directive is not likely to change the Contract Time or Times, the space for estimated increase (decrease) should be marked "Not Applicable."

Once Engineer or Architect has completed and signed the form, all copies should be sent to Owner for authorization because neither Engineer nor Architect alone has the authority to authorize changes in the Contract Sum or Price or the Contract Time or Times. Once authorized by Owner, a copy should be sent by Engineer or Architect to Contractor. The Contract Sum or Price and the Contract Time or Times may only be changed by Change Order signed by Owner and Contractor with Engineer's or Architects' recommendations.

Once the Work covered by this directive is completed or final cost and times are determined, Contractor should submit documentation for inclusion in a Change Order.

THIS IS A DIRECTIVE TO PROCEED WITH A CHANGE THAT MAY AFFECT THE CONTRACT SUM OR PRICE OR THE CONTRACT TIME OR TIMES. A CHANGE ORDER, IF ANY, SHOULD BE CONSIDERED PROMPTLY.

WORK CHANGE DIRECTIVE

WORK CHANGE DIRECTIVE NO.: _____ DATE: _____

Project: _____

Contractor _____

Engineer/Architect _____

You are directed to proceed promptly with the following change(s):

Description: _____

Purpose of Work Change Directive: _____

Attachments (List documents supporting change): _____

If a claim is made that the above change(s) have affected the Contract Sum or Price or the Contract Time or Times, any claim for a Change Order based thereon will involve one or more of the following methods of determining the effect of the change(s).

Method of determining change in Contract Sum or Price:

Unit Prices

Lump Sum

Other _____

Method of determining change in Contract Time or Times:

Contractor's records

Engineer's records

Other _____

Estimated (increase/decrease) in Contract Price:

\$ _____

Estimated (increase/decrease) in Contract Times:

Substantial Completion: _____ days;

Ready for final payment: _____ days;

If the change involves an increase, the estimated price and times are not to be exceeded without further authorization.

RECOMMENDED:

By: _____

Development Inspection Administrator
or Senior Engineer
(Authorized Signature)

Date: _____

APPROVED:

By: _____

Director of Engineering
(Authorized Signature)

Date: _____

ACCEPTED:

By: _____

Contractor
(Authorized Signature)

Date: _____

Distribution: Project Inspector
Lead Inspector
Project Engineer
Director of Engineering/Town Engineer
Contractor

CONTRACTOR'S RELEASE OF OWNER

The Contractor, known as _____,

for the construction of Project: _____,

hereby and forever releases the Town of Holly Springs (Owner), its officers, agents, and [Engineers/Architects]: _____, from all past, present, and future claims and liability to the Contractor for anything done or furnished for, relating to, or for any act of neglect of the Owner, its engineers, or any persons relating to or affecting the work.

Contractor's Certification:

Contractor: _____

Authorized Representative: _____

Date: _____

CONSENT OF SURETY COMPANY TO FINAL PAYMENT

PROJECT: _____

OWNER: _____

CONTRACTOR: _____

CONTRACT: _____ DATE: _____

TO: _____

In accordance with the provisions of the Contract between the Town of Holly Springs (Owner), and the Contractor, known as _____, the Surety Company, known as _____, on bond of Contractor, hereby approves of the final payment to Contractor, and agrees that final payment to Contractor shall not relieve the Surety Company of any of its obligations to the Owner as set forth in said Surety Company's bond.

In witness whereof, the Surety Company has hereunto set its hand this ____ day of _____ in the year _____.

Surety Company

Signature of Authorized Representative

[Seal]

Typed Name and Title of Authorized Representative

FINAL RECEIPT

Contract: _____

Received this _____ day of _____, 20____ as full and final payment of the cost of all improvements provided for in the foregoing Contract the sum of _____ Dollars and _____ Cents, (\$ _____), in cash, being the full amount accruing to the undersigned by virtue of said Contract, said cash covering and including full payment for all extra work and material furnished by the undersigned in the construction of said improvements, and all incidentals thereto, and the undersigned hereby releases the said _____ from all claims whatsoever growing out of the said Contract.

These presents are to certify that all persons doing work upon or furnishing materials or supplies for said improvements under the foregoing Contract have been paid in full.

The undersigned further certifies that all taxes imposed by Chapter 212, North Carolina Statutes (Sales and Use Tax Act), as amended, have been paid and discharged.

CONTRACTOR

By: _____ (Seal)

(Typewritten Name)

SECTION 00910

CERTIFICATE OF TOWN ATTORNEY

I am the Town Attorney for the Town of Holly Springs and after receiving these documents, I find them legally sufficient as to form.

BY: _____

TITLE: _____

DATE: _____

CERTIFICATE OF FINANCE OFFICER

I hereby certify that I am the legal and duly appointed Financial Officer for the Owner of this project and that provision for the payment of the moneys to fall due under this agreement has been made or will be made by appropriation duly made or by bonds or notes duly authorized, as required by the Local Government and Fiscal Control Act.

BY: _____

TITLE: _____

DATE: _____

- END OF SECTION 00910 -

SECTION 01000
DEFINITIONS, ABBREVIATIONS and REFERENCE STANDARDS

PART 1 - DEFINITIONS

- A. CONTRACTOR – The successful Bidder to whom a contract has been awarded and who has properly executed the contract documents.
- B. EASEMENT – An interest in land owned by another that entitles its holder to a specific use. Or a property right to use or control real property of another.
- C. ENGINEER – The Director of Engineering of the Town of Holly Springs or other representative duly authorized by the Director of Engineering.
- D. INSPECTOR – The Lead Development Inspector, a Construction Inspector, or other representative duly authorized by the Director of Engineering.
- E. ENGINEER'S CONSULTANT – Duly authorized representative from hired firm.
- F. INVERT - The lowest point in the internal cross section of a pipe or other culvert.
- G. OWNER – The Town of Holly Springs, a Municipal Corporation of the State of North Carolina.
- H. PLANS – The approved design drawings that show the work to be done.
- I. RIGHT OF WAY - The area that encompasses public streets, sidewalks and utility strips.
- J. SUBGRADE - That portion of the roadbed prepared as a foundation for the pavement structure.

PART 2 – ABBREVIATIONS The following is a partial list of abbreviations that may appear in the specifications, plans, and/or estimates and their definitions.

- A. A.B.C. aggregate base course
- B. A.B.S. Acrylonitrile Butadiene Styrene
- C. A.F.F. above finished floor
- D. AWG American Wire Gauge

E.	B.C.Y	bank cubic yard
F.	BHP	brake horsepower
G.	BOC	back of curb
H.	BV	butterfly valve
I.	C/O	sewer clean out
J.	°C	degrees Centigrade
K.	C.F.	cubic feet
L.	CMP	corrugated metal pipe
M.	CV	check valve
N.	cy or cu. yd.	cubic yard
O.	DIP	ductile iron pipe
P.	EI or EIT	Engineer Intern
Q.	EIP	existing iron pipe
R.	EOP	edge of pavement
S.	°F	degrees Fahrenheit
T.	FES	flared end section (pipe)
U.	ft.	foot
V.	gpd	gallons per day
W.	gpm	gallons per minute
X.	GV	gate valve
Y.	HDPE	high density polyethylene
Z.	HP	horsepower
AA.	ID	internal diameter

BB.	in.	inches
CC.	inv	invert
DD.	lbs.	pounds
EE.	L.F.	Linear Feet
FF.	MH	manhole
GG.	max.	maximum
HH.	min.	minimum
II.	M.S.F	thousand square feet
JJ.	MSL	mean sea level
KK.	MUTCD	Manual on Uniform Traffic Control Devices
LL.	NCDENR	North Carolina Department of Environment and Natural Resources
MM.	NCDOT	North Carolina Department of Transportation
NN.	NPDES	National Pollutant Discharge Elimination System
OO.	O.C.	on center
PP.	OD	outside diameter
QQ.	OHPL	overhead power line
RR.	OSHA	Occupational Safety and Health Act
SS.	oz.	ounce
TT.	PAM	Polyacrylamide
UU.	P.C.	point of curvature
VV.	P.E.	Professional Engineer, registered in North Carolina
WW.	pH	measure of the acidity or alkalinity of a solution

XX. P.L.S. Professional Land Surveyor, registered in North Carolina

YY. ppm parts per million

ZZ. psi pounds per square inch

AAA. PL property line

BBB. P.T. point of tangency

CCC. PVC polyvinyl chloride

DDD. P.V.C. point of curvature on vertical curve

EEE. P.V.T. point of tangency on vertical curve

FFF. Qmax maximum discharge

GGG. Qmin minimum discharge

HHH. R. or Rad. radius

III. RCP reinforced concrete pipe

JJJ. RH relative humidity

KKK. SCS Soil Conservation Service

LLL. sec. second

MMM. S.F. or sq. ft. square feet

NNN. S.Y. or sq. yd. square yard

OOO. TDH total dynamic head

PPP. TOHS Town of Holly Springs

QQQ. Typ. typical

RRR. UPL underground power line

SSS. VAC volts (alternating current)

TTT. VDC volts (direct current)

UUU. WM water meter

VVV. WV water valve

WWW. yd yard

PART 3 – REFERENCE STANDARDS

All materials, products and procedures incorporated into the work shall be in strict accordance with the following codes, standards and specifications. Wherever reference is made to any published standard, code or standard specification, it shall mean the latest edition in effect at the invitation for bids.

- A. American Association of State Highway and Transportation Officials (AASHTO)
- B. American National Standards Institute (ANSI)
- C. American Society of Testing and Materials (ASTM)
- D. American Water Works Association (AWWA)
- E. Ductile Iron Pipe Research Association (DIPRA)
- F. Manual on Uniform Traffic Control Devices for Streets and Highways, as prepared by the National Advisory Committee on Uniform Traffic Control Devices (MUTCD)
- G. North Carolina Department of Transportation (NCDOT), January 2024 “Standard Specifications for Roads and Structures”, may be obtained from NCDOT Contract Standards and Development Unit, Manual Distribution, 1591 Mail Service Center, Raleigh, NC 27699, phone 919-707-6900.
- H. National Pre-Cast Concrete Association (NPCA)
- I. North Carolina Department of Environment and Natural Resources (NCDENR)
- J. National Electrical Code (NEC)
- K. National Electrical Manufacturers Association (NEMA)
- L. Natural Resources Conservation Service (NRCS [formerly “SCS”])

- M. New York Department of Transportation (NYDOT)
- N. Occupational Safety and Health Act (OSHA)
- O. Soil Conservation Service (SCS)
- P. Town of Holly Springs (TOHS) "Engineering Design and Construction Standards" - may be obtained from the office of the Engineering Director, Holly Springs Municipal Bldg., 128 S. Main St., Holly Springs, North Carolina. Where TOHS standard specifications exceed NCDOT standards, the TOHS standard specification shall apply.
- Q. Underwriters Laboratories, Inc. (UL)

END OF SECTION 01000

SECTION 02000
SUBMITTALS

PART 1 – SUBMITTALS

A. General Submittal Requirements

- i. Submittals shall meet the requirements of the General Conditions and Supplementary Conditions.
- ii. The following submittals will be required for this project:
 - RCP
 - Geotextile
 - Precast Drainage Structures
 - Curb & Gutter
- iii. The Contractor shall transmit submittals in sufficient time to allow thorough review by the Engineer.
- iv. Submittals shall be accompanied by a letter of transmittal containing the date, project name, Contractor's name, supplier, manufacturer, number and title of submittal, notification of exceptions and/or deviations from the Contract requirements, and any other pertinent data to facilitate review.
- v. The Contractor shall thoroughly check all submittals for accuracy and conformance to the intent of the Contract Documents, and make any necessary changes, prior to submitting them to the Engineer. All submittals shall bear the Contractor's certification stating that they have been so checked. **This certification shall include the following statement: "By this Submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers, and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all contract requirements." SUBMITTALS WITHOUT THE CONTRACTOR'S CERTIFICATION WILL BE RETURNED TO THE CONTRACTOR WITHOUT REVIEW.**
- vi. No material shall be ordered, fabricated or shipped or any work performed until the Engineer returns the required submittal to the Contractor with satisfactory review indicated.
- vii. The Engineer's review of the Contractor's submittals shall in no way relieve the Contractor of any responsibility under the Contract. An acceptance of a submittal shall be interpreted to mean that the Engineer

has no specific objections to the submitted material, subject to conformance with the Contract Documents.

B. Shop Drawings

- i. The Contractor shall submit to the Engineer for review shop drawings for all fabricated work and for all manufactured items for which shop drawings are required elsewhere in the project manual.
- ii. Where manufacturer's publications in the form of catalogs, brochures, illustrations or other data sheets are submitted, items for which approval is requested shall be specifically indicated. Submittals showing only general information shall not be acceptable.
- iii. Within ten (10) days after notice to proceed, the contractor shall submit three (3) copies of his preliminary schedule of shop drawing submittals to the Engineer for approval.

C. Layout and Installation Drawings

- i. The Contractor shall submit to the Engineer, for review, layout and installation drawings for all pipes, valves, fittings, sewers, manholes, electrical, conduits, etc. to be provided under this contract.
- ii. Within ten (10) days after notice to proceed, the contractor shall submit three (3) copies of his preliminary schedule of layout and installation drawing submittals to the Engineer for approval.

PART 2 – OTHER REQUIREMENTS

A. Progress Schedule

- i. The Contractor shall submit three (3) copies of its proposed progress schedule to the Engineer for review and approval, in accordance with the General Conditions.
- ii. Progress schedule shall be updated monthly, with three (3) copies submitted to the Engineer with the application for payment. The Engineer may withhold progress payments until such time as the schedule or revised schedule is received.
- iii. Progress schedule shall be prepared in the form of a horizontal bar chart showing in detail the proposed sequence of work. Schedule shall be time scaled showing start and completion dates for each stage of the work. The schedule shall account for all subcontractors. The schedule shall provide for proper sequence of construction considering various crafts, purchasing time, submittal review, material delivery, equipment

fabrication and similar time-consuming factors. The schedule shall show as a minimum, earliest starting, earliest completion, latest starting, latest completion, and total float for each task or item.

B. List of Subcontractors

- i. The Contractor shall comply with the NCDOT, January 2024, "Standard Specifications for Roads and Structures" for the use of subcontractors. Each subcontractor must be submitted through NCDOT prequalifications as listed in the 2024 NCDOT Standard Specifications and contract standard provisions.

C. As-Built Drawings

- i. If Town employee signed and sealed the construction plan: Contractors shall provide a complete as-built point file so that the Town Project Engineer can provide three (3) complete sets of field-surveyed and sealed As-Built plans, (1 set mylar, 2 sets blue prints) at the completion of the project, prior to final payment. As-builts shall conform to the requirements set forth in the Town of Holly Springs, "Engineering Design and Construction Standards", with all information tied to the appropriate local Town benchmark monument.
- ii. If Town outsourced the sign and seal of the Construction Plan: Contractor shall provide a complete as-built point file to original design engineer and provide three (3) complete sets of field-surveyed and sealed As-Built plans to the Town of Holly Springs (1 set mylar, 2 sets blue prints) at the completion of the project, prior to final payment. As-builts shall conform to the requirements set forth in the Town of Holly Springs, "Engineering Design and Construction Standards", with all information tied to the appropriate local Town benchmark monument.

END OF SECTION 02000

SECTION 03000
CLEARING AND GRUBBING

PART 1 - GENERAL

- A. The Contractor shall furnish all labor, equipment, materials, tools, etc. and shall perform all clearing and grubbing of trees, down timber, logs, snags, brush undergrowth, heavy growth of grass or weeds, debris, and rubbish, etc. Care shall be taken to minimize removal of acceptable soil material from the site when clearing and grubbing. All such material shall be disposed of by burning (when permitted), suitable removal from the site, or other means acceptable to the Engineer.
- B. The width of clearing for the project shall be limited to the right of way, temporary and permanent easements, sight triangles and permitted impacts to streams, wetlands, and riparian buffers as noted on the drawings or in the environmental permit conditions for the project. The entire width of the permanent easement is to be cleared unless otherwise indicated by clearing limits noted on the drawings. Clearing and grubbing shall be conducted in a manner to prevent damage to vegetation that is intended to remain growing and also to prevent damage to adjacent property. See Section 40000, Special Construction.
- C. The Engineer will designate all areas of growth or individual trees inside the clearing limits, which are to be preserved due to their desirability. The trees to be preserved will be shown in the Contract Documents or otherwise designated by the Engineer. The Contractor will install a tree protection fence outside the drip line of such designated trees prior to commencing with clearing and grubbing operations.
- D. All spoil materials that are removed by clearing and grubbing operations shall be adequately disposed of, removed from the site or burned if permitted by the appropriate authorities. The contractor shall be responsible for controlling fires in compliance with all Federal, State or local laws.
- E. All work performed under this section shall be conducted to minimize erosion and sediment pollution as outlined in Section 16000. Installation of temporary or permanent erosion control measures shall occur prior to clearing and grubbing operations or as directed by the Engineer. The Town of Holly Springs will be responsible for obtaining an erosion control and sedimentation permit, prior to beginning construction, when disturbance is greater than one acre within the project construction limits. The Contractor shall obtain an erosion control and sedimentation permit for any other disturbance including but not limited to the borrow pit.

F. Tree Protection will be installed around those areas indicated on the plans for protection, by local, state, or federal environmental permits or designated by the Engineer in the field. Tree protection will be installed prior to any clearing and grubbing for the project unless designated by the Development Inspector. A site inspection shall be held with the Contractor and Development Inspector or designee to confirm that the installation matches the drawings and environmental permit conditions. The tree protection fence shall consist of steel posts and orange, UV resistant, high-strength, poly barricade fabric constructed per standard details provided in the plans. Signs shall be placed on the fence with the inscription: "Tree Protection Fence – Do Not Enter". This tree protection fence should not be encroached upon for any reason unless otherwise directed by the Engineer. All reasonable efforts will be made to avoid skinning or crushing roots, skinning or bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line or excess foot or vehicular traffic or parking of vehicles within the drip line.

PART 2 - PAYMENT

A. Basis of Payment: No separate payment will be made for Clearing and Grubbing or any work associated with it according to Section 200 of the NCDOT Standard Specifications for Roads and Structures, as such work will be incidental to the work covered by the GRADING line item.

END OF SECTION 03000

SECTION 04000
EARTHWORK
(Revised 1-9-02)

PART 1 - GENERAL

- A. The work covered by this section consists of the excavation, placement, and compaction or satisfactory disposal of all materials encountered within the limits of the work necessary for the construction of the project in conformity with the lines, grades, and cross sections shown on the plans or established by the Engineer.
- B. The Contractor shall fill areas that settle unevenly during the course of construction at no additional cost to the Owner.

PART 2 - UNCLASSIFIED EXCAVATION

- A. All material excavated in order to achieve the site lines, grades, and cross sections shown on the plans shall be classified as Unclassified Excavation.
- B. Blasting shall not be permitted on this project.
- C. Whenever encountered during work, remove any trash and non-natural debris. Remove all roots and pieces of wood or debris larger than three (3) inches in diameter.
- D. All suitable material removed in the excavation shall be used as far as practicable in the formation of embankments, subgrades, and shoulders, and at such other places as may be indicated on the plans or directed by the Engineer. Unsuitable material and excess excavated material not required for construction of embankments shall be properly disposed of offsite at no additional cost to the Owner.
- E. The intersection of slopes with natural ground surfaces, including the beginning and ending of cut slopes, shall be uniformly rounded as shown on the plans or as may be directed by the Engineer. Concurrent with the excavation of cuts, the Contractor shall construct intercepting berm ditches or earth berms along and on top of the cut slopes at locations shown on the plans or designated by the Engineer. All slopes shall be finished to reasonably uniform surfaces acceptable for seeding and mulching operations.

All protruding roots and other objectionable vegetation shall be removed from slopes.

- F. The Contractor shall, as directed by the Engineer, cut off and plug all private utility lines, and remove all underground tanks encountered within the right of way or construction limits during construction in accordance with State requirements. This work shall be included in the unit price of GRADING.
- G. When the Contractor's excavation operations encounter graves, the operations shall be temporarily discontinued in the vicinity of the graves and not resumed until so directed by the Engineer.
- H. When the Contractor's excavation operations encounter artifacts of historical or archeological significance, the operations shall be temporarily discontinued in the vicinity of the artifacts and not resumed until so directed by the Engineer. Disposition of the artifacts shall be in accordance with the requirements of the State Division of Archives and History.
- I. A tolerance of plus or minus 0.10 foot from the established grade will be permitted in the roadbed after it has been graded to a uniform surface.
- J. The Contractor shall be responsible during construction and until final acceptance for the maintenance of all work covered by this section.
- K. During construction and until final acceptance, the Contractor shall shape the excavated surface to provide for the drainage of surface runoff along and throughout the length of the cut, shall construct temporary ditches, and use any other methods necessary to maintain the work covered by this section so that the work will not contribute to excessive soil erosion.
- L. As much as practicable, the Contractor shall perform the work covered by this subsection and the construction of embankments in such a manner that cut and fill slopes will be completed to final slopes and grade in a continuous operation. The operation of removing excavation material from any cut and the placement of embankment in any fill shall be a continuous operation to completion unless otherwise permitted by the Engineer.
- M. If grading operations are suspended for any reason whatsoever, partially completed cut and fill slopes shall be brought to the required slope and the work of seeding and mulching or other required erosion control operations shall be performed.
- N. Basis of Payment:
 - i. No separate payment will be made for Unclassified Excavation or any work associated with it according to Section 225 of the NCDOT Standard Specifications for Roads and Structures, as such work will be incidental to the work covered by the GRADING line item.

PART 4 - EMBANKMENT

- A. The work covered by this subsection consists of placing in embankments, backfills, and earth berms, suitable material excavated as previously described by these specifications in conformity with the lines, grades, and typical cross sections shown on the plans or established by the Engineer. It shall include the preparation of the areas upon which the embankment is to be constructed; the formation, compaction, stability, and maintenance of the embankment.
- B. Before embankment construction is begun, all vegetation, debris, deleterious and unsuitable material shall be removed from the area within the limits of the embankment.
- C. Embankment material and backfill material shall consist of clean, readily compactible earthen material with a maximum particle size of two (2) inches. Embankment material shall be free from debris, organic matter, frozen or deleterious material, and shall be approved for use by the Owner.
- D. The embankment material shall be deposited and spread in successive, uniform, approximately horizontal layers of not more than eight (8) inches in depth, loose measurement, for the full width of the cross section, and shall be kept approximately level by the use of effective spreading equipment. Each layer of the embankment shall be thoroughly compacted as hereinafter specified. Hauling shall be distributed over the full width of the embankment, and in no case will deep ruts be allowed to form during the construction of the embankment. The embankment shall be properly drained at all times.
- E. All embankment material shall be compacted as specified herein unless otherwise provided in the contract or directed by the Engineer. Compaction equipment used by the Contractor shall be adequate to produce the required compaction and produce a uniformly constructed embankment with all layers uniformly bound to all preceding layers.
- F. The embankment material shall be compacted to at least 95% of the maximum dry density obtained by compacting a sample of the material in accordance with ASTM D-698, except for the upper one foot of subbase below pavement base, which shall be compacted to at least 100% of the maximum dry density obtained by compacting a sample in accordance with ASTM D-698. Embankment materials shall be compacted at a moisture content satisfactory to the Engineer, which shall be approximately that required to produce the maximum dry density. The Contractor shall dry or add moisture to the embankment material when required to provide a uniformly compacted and stable embankment.
- G. Backfill materials placed around and over pipe culverts, box culverts, and arch culverts, and embankment materials placed around other structures, shall be

clean select material. The material shall be placed and compacted in a manner, which will avoid unbalanced loading and will not produce undue stress on the structure. Such embankments shall be placed in loose layers not to exceed six (6) inches in depth and each layer shall be thoroughly compacted as hereinafter specified. All pipe culverts, box culverts, and arch culverts, after being backfilled as specified in this subsection, shall be protected by a three (3) foot cover of fill at any time that heavy hauling equipment is permitted to cross during construction of the roadway. Any damage or displacement to culverts or other structures due to the Contractor's operation shall be corrected or repaired by the Contractor prior to final acceptance at no cost to the Owner.

- H. The Contractor shall be responsible during construction and until final acceptance for the maintenance of all embankments made under the contract.
- I. During construction and until final acceptance, the Contractor shall construct temporary or permanent earth berms along the outer edges of the top surface of the embankment, construct temporary ditches, shape the embankment surface to provide for the drainage of surface runoff along and throughout the length of the embankments, and use any other methods necessary to maintain the work covered by this section so that the work will not contribute to excessive soil erosion.
- J. The contractor shall replace, at no cost to the Owner, any portion of embankments, which have become displaced or damaged due to carelessness or neglect on the part of the Contractor. Where the work has been properly constructed, completely drained, and properly maintained, and damage occurs due to natural causes, the Contractor will be paid at the contract unit price for the excavated material required to make necessary repairs to such damage. Measurements of quantities must be performed and approved prior to commencement of work.
- K. All embankments shall be brought to the grade and cross section shown on the plans, or established by the Engineer, prior to final inspection and acceptance by the Engineer.
- L. Basis of Payment:
 - i. The quantity of embankment shall be determined from proposed plan cross sections using the prismatic method. Shrinkage factors shall not be used in calculating embankment quantities. There will be no separate payment for embankment. The price for placement of embankment shall be included in the contract price for GRADING. This price and payment will be full compensation for all work covered by this section, including but not limited to constructing all embankments necessary to achieve the lines, grades, and cross sections indicated on the plans, backfilling of utilities, appurtenances, miscellaneous structures required, and maintaining the work.

PART 5 - UNDERCUT EXCAVATION

- A. The work covered by this subsection consists of the excavation, placement, and compaction and/or satisfactory disposal of materials removed from a location below the finished graded cross section.
- B. When the Engineer determines that the natural soil materials are undesirable in their location or condition, the Engineer may require the Contractor to remove this undesirable material and backfill with approved material properly compacted.
- C. Where undercutting is required adjacent to or beneath the location of a proposed drainage structure, undercut and backfill shall be done over a sufficient distance adjacent to the installation to prevent future operations from disturbing the completed drainage structure.
- D. All materials removed in the work of undercut excavation will be classified by the Engineer as either suitable for use without excessive manipulation and utilized by the Contractor elsewhere in the work, or unsuitable for further use and disposed of by the Contractor as directed by the Engineer.
- E. The Contractor shall conduct undercut operations in such a way that the Engineer can take the necessary measurements before any backfill is placed.
- F. Backfill in undercut areas shall be placed as a continuous operation along with the undercutting operation. Backfill material shall not be placed in water unless otherwise permitted by the Engineer.
- G. All materials which the Contractor has been directed to excavate from a location below the finished graded cross section will be classified as undercut excavation and will be measured separately.
- H. Basis of Payment:
 - i. The quantity of material excavated in accordance with this subsection shall be paid for at the Contract unit price per cubic yard for "Undercut Excavation" as indicated in the Itemized Proposal. This payment shall be full compensation for all work covered by this section, including but not limited to excavation, removal of undesirable material, disposal of materials, backfilling with suitable material and maintaining the work.

END OF SECTION 04000

SECTION 06000
CAST IN PLACE CONCRETE
(Revised 1-9-02)

PART 1 - MATERIALS

- A. Portland cement concrete for curb and gutter, driveways, driveway aprons, wheelchair ramps, sidewalks, traffic islands and other items as specified on the plans shall have a minimum 28 day compressive strength of 3,000 psi, a non-vibrated slump between 2.5 and 4 inches, a minimum cement content of 545 pounds per cubic yard, an air entrainment of 5 - 7%, and a maximum water-cement ratio of 0.545 in accordance with Class B concrete as described in the NCDOT "Standard Specifications for Roads and Structures" unless otherwise specified in the Contract Documents. Portland cement concrete for structures, culverts and other items as specified on the plans shall be Class A or Class AA in accordance with NCDOT "Standard Specifications for Road and Structures." Dyed concrete is not allowed in construction of driveway aprons or public sidewalks unless otherwise specifically required in the Contract Documents.
- B. Joint filler shall be a non-extruding joint material conforming to ASTM C1751.
- C. Aggregate for portland cement concrete shall meet the requirements for fine and course aggregate of Section 1014 of the NCDOT "Standard Specifications for Roads and Structures."
- D. Portland Cement and admixtures shall meet the requirements of Section 1000 of the NCDOT "Standard Specifications for Roads and Structures."
- E. Water for mixing or curing the concrete shall be free from injurious amounts of oil, salt, acid, or other products injurious to the finished product.

PART 2 - QUALITY ASSURANCE

- A. Concrete shall be only plant-mixed, transit-mixed or ready-mixed concrete. The time elapsing from mixing to placing the concrete shall not exceed ninety (90) minutes. Concrete shall not be deposited on frozen subgrade and shall not be poured when the air temperature is falling and below 40° F, and the predicted low temperature for the succeeding 24 hour period is less than 32° F.
- B. All concrete when placed in the forms shall have a temperature of between 50° F and 90° F and shall be maintained at a temperature of not less than 50° F for at least 72 hours for normal concrete and 24 hours for high early strength concrete, or for as much time as is necessary to secure proper rate of curing

and designed compressive strength. The use of admixture, retarders, and accelerators shall be used as directed by the Engineer.

PART 3 - CONSTRUCTION METHODS - GENERAL

- A. Proportioning of Concrete: The concrete shall be mixed in proportions discussed herein and approved by the Engineer.
- B. Mixing Concrete: The concrete shall be mixed by machine on the job or at a central mixing plant. A batch mixer of any approved type may be used. The method of measuring the materials for the concrete, including water, shall be one which will insure separate and uniform proportions of each of the materials at all times. The mixing shall continue at least 1-1/2 minutes after all ingredients have been emptied before receiving material for the succeeding batch.
 - i. A central mixing plant shall not be used until approved by the Engineer and shall be certified by the NCDOT. The concrete from a central plant shall be delivered and deposited at the consistency specified without segregation. The time elapsing from mixing to placing the concrete shall not exceed ninety (90) minutes.
 - ii. Concrete shall be mixed only in such quantities as are required for immediate use and all such material shall be used while fresh and before initial set has taken place. Any concrete in which set has begun shall not be used in the work. Retempering of concrete will not be allowed.
- C. Subgrade: The subgrade shall be excavated to the required depth below the finished surface in accordance with the plans to the lines and grades established by the Engineer. All soft yielding material or other unsuitable material shall be removed and replaced with suitable material and the subgrade shall be compacted thoroughly and finished to a firm, smooth surface. No curb and gutter, driveways, driveway aprons, wheelchair ramps, sidewalks, or traffic islands shall be poured until the subgrade is approved by the inspector.
- D. Forms: The forms shall be of metal and of the necessary dimensions to construct the combined curb and gutters specified in the plans. Wood forms may be used where conditions make the use of metal forms impractical. The use of wood forms must be approved by the Engineer. The forms shall be set true to the line and grade established by the Engineer and held rigidly in position, so as to prevent leakage of mortar and springing out of line when the concrete is placed in them. The forms shall be true in line, free from warping or bending. No concrete shall be placed until the forms and subgrades have been approved by the Inspector.

- E. Placing of Concrete: The subgrade shall be moistened and the concrete shall be placed in the forms and tamped sufficiently to bring the mortar to the surface, after which it shall be finished smooth and even by means of a wooden float.
- i. The curb and gutter shall be constructed in place in uniform sections ten (10) feet in length. The joints between sections shall be formed by steel templates one-sixth ($1/6$) inch in thickness and of the width and depth of the curb and gutter. The templates shall be left in place until the concrete has set sufficiently to hold its shape, but shall be removed while the forms are still in place.
 - ii. Machine poured concrete curb and gutter will be scored at 15 feet intervals with expansion joints located at intervals no greater than 50 feet.
 - iii. Expansion joints shall be one-half ($1/2$) inch in width and shall be placed between all rigid objects at a distance of no more than fifty (50) feet apart and shall extend the full depth of the concrete with the top of the filler one-half ($1/2$) inch below the finished surface.
- F. Finishing: The edges of the curb and gutter shall be finished with an approved edging tool of one-half ($1/2$) inch radius. Joints shall be similarly finished immediately after the templates have been removed.
- G. Curing: Contractor may select method of curing provided that the method is approved by the Engineer and that the means and methods of curing conform to standards specified by current AASHTO or ASTM specifications.
- H. Removing Forms: Forms shall not be removed from freshly placed concrete until it has set for at least 12 hours. Forms shall be carefully removed in such a manner as to prevent damage to the edges of the concrete. Any honeycombed areas along the sides shall be filled promptly with mortar composed of one part cement and two parts of fine aggregate.
- I. Cold Weather and Night Concreting: Concreting shall be done when weather conditions are favorable unless otherwise directed by the Engineer. Concrete operations shall be discontinued when a temperature of 40° F is reached on a falling thermometer and may be continued when temperature reaches 35° F on a rising thermometer. No concreting shall be attempted when local weather bureau indicates temperature below freezing within the ensuing 24 hours unless proper precautions are made to protect the concrete by covering with straw or other thermal insulation satisfactory to the Engineer. The Contractor shall be responsible for the quality and strength of the concrete laid during cold weather and any concrete damaged by frost action or freezing shall be removed and replaced as directed by the Engineer at the Contractor's expense.

- i. The Contractor may be permitted by the Engineer to proceed with concrete operations during cold weather in temperatures of not less than 25° F at placing time provided that the Contractor furnishes an approved admixture and uses an amount per batch not to exceed two percent (2%) by weight of the total amount of cement, and further provided that he takes other precautions deemed necessary by the Engineer to prevent concrete from freezing during curing period.
 - ii. No more concrete shall be laid than can be properly finished and covered during daylight, unless adequate artificial light satisfactory to the Engineer is provided.
- J. Protection of Concrete: Immediately after the forms have been removed and all honeycombed areas repaired, the back of the curb shall be backfilled to prevent underwash. Traffic shall be excluded from crossing the concrete for a period of approximately fourteen (14) days, by erection and maintenance of suitable barricades, unless otherwise specified in the Contract Documents or by the Engineer. Contractor shall be responsible for any damage resulting from traffic or vandalism until accepted by the Engineer, and he shall remove and replace any concrete damaged as directed by the Inspector.

PART 4 - CONSTRUCTION METHODS - CURB & GUTTER, DRIVEWAYS, DRIVEWAY APRONS, WHEELCHAIR RAMPS, SIDEWALKS, AND TRAFFIC ISLANDS

- A. Areas of concrete to be removed shall be sawcut before removing. The sawcut shall provide a smooth, straight edge approximately two (2) inches deep before breaking away the adjacent concrete. There will be no direct payment for the work covered by this section.
- B. Concrete shall be constructed in accordance with Section 825 of the NCDOT "Standard Specifications for Roads and Structures" and shall be given a "sidewalk finish," except as otherwise noted herein.
- C. Brooming of the concrete surface shall be done transverse to the direction of traffic. Joint spacing shall not be less than 5 feet. Where existing sidewalks are being widened, transverse joints shall be located so as to line up with existing joints in the adjacent existing sidewalk. Grooved joints shall not be sealed.
- D. No backfill shall be placed adjacent to the curb & gutter, driveways, driveway aprons, wheelchair ramps, or sidewalks until at least 3 curing days have elapsed, as defined in Section 825-9 of the NCDOT "Standard Specifications for Roads and Structures." However, all backfill shall be placed within 4 calendar days after the completion of this 3 curing day time period. Backfill

shall clean earthen material free of all debris and shall be compacted to a degree comparable to the adjacent undisturbed material or as directed by the inspector.

PART 5 - PAYMENT

A. Basis of Payment: Compensation for cast in place concrete items shall be as follows:

- i. Payment for "Concrete Curb and Gutter" shall be paid at the unit price bid per linear foot for the type as indicated in the Itemized Proposal and in accordance with Town of Holly Springs Standard Details. The aggregate base course or asphalt concrete placed under the concrete curb and gutter shall be in accordance with Town of Holly Springs Standard Details and shall be included in the unit price bid for curb and gutter. Unit price shall be full compensation for all labor, equipment and materials to furnish and install curb and gutter, and aggregate base course or asphalt concrete under the curb and gutter. Payment for this item shall not be made until work is complete, including backfilling and seeding & mulching, and has been inspected and accepted by the inspector.
- ii. Payment for "Concrete Sidewalk" shall be paid at the unit price bid per Square Yard at the thickness designated in the Itemized Proposal and in accordance with Town of Holly Springs Standard Details. Unit price shall be full compensation for all labor, equipment and materials to furnish and install concrete sidewalk. Payment for this item shall not be made until work is complete, including backfilling and seeding & mulching, and has been inspected and accepted by the inspector.
- iii. Payment for "Concrete Curb Ramps" shall be paid at the unit price bid per each item as designated in the Itemized Proposal and in accordance with Town of Holly Springs Standard Details. Unit price shall be full compensation for all labor, equipment and materials to furnish and install concrete wheelchair ramps, depressed curb and gutter, and aggregate base course or asphalt concrete under the depressed curb and gutter or wheelchair ramp, expansion joints, control joints, and detectable warning domes necessary for the construction of the concrete wheelchair ramp. Payment for this item shall not be made until work is complete, including backfilling and seeding & mulching, and has been inspected and accepted by the inspector.
- iv. Payment for "Concrete Driveway Aprons" shall be paid at the unit price bid per each at the width designated in the Itemized Proposal and in accordance with Town of Holly Springs Standard Details. Unit price shall be full compensation for all labor, equipment and materials to furnish and install concrete driveway aprons. Payment for this item shall not be made until

work is complete, including backfilling and seeding & mulching, and has been inspected and accepted by the inspector.

- v. Payment for “Concrete Pipe Collars” and “Pipe Plugs” shall be paid at the unit price bid per cubic yard for each item as designated in the Itemized Proposal and in accordance with Section 840 of the NCDOT “Standard Specifications for Roads and Structures”. Unit price shall be full compensation for all labor, equipment and materials to furnish and install the concrete.
- vi. Payment for Concrete Driveways and other Miscellaneous Concrete shall be paid at the unit price bid per cubic yard at the class designated or as indicated in the Itemized Proposal. Unit price shall be full compensation for all labor, equipment and materials to furnish and install the concrete.

END OF SECTION 06000

SECTION 09000
STORM DRAINAGE
(Revised 1-9-02)

PART 1 - GENERAL

- A. The work of furnishing and installing storm sewer shall consist of performing all work and services necessary to complete the construction of the storm sewer pipe and the catch basins in accordance with the provisions of the Contract Documents.
- B. Where proposed storm sewers are to be installed under existing roadways, the construction shall be performed in such a way that half of the roadway will be maintained and available to traffic in accordance with the plans, Contract Documents, the NCDOT "Roadway Standard Drawings," and the MUTCD.

PART 2 - SUBMITTALS

- A. The Contractor shall submit shop drawings to the Engineer for all storm drainage materials to be used on this project. Submittals shall be in accordance with Section 02000 of the Contract Documents.

PART 3 - QUALITY STANDARDS

- A. Procedures for handling, laying, protection and use of pipe shall be in accordance with the pipe manufacturer's recommendations and these specifications. Procedures for construction of drainage structures shall be in accordance with these specifications.
- B. Reinforced Concrete Pipes and Flared End Sections shall be as per ASTM C76, Table III or Table IV with a diameter as indicated on plans. The pipe shall be equal to that as furnished by N.C. Products or Adams Concrete. Joints shall be wiped with mortar or sealed with a plastic cement putty meeting Federal specification SS-S-00210, such as Ram-Nek or a butyl rubber sealant.
- C. Corrugated Steel Pipe shall conform to AASHTO M36 with pipe ends having no less than 2 round corrugations on each end. Bands for connecting pipe shall be corrugated with a minimum of 2 corrugations for each pipe. The pipe shall be fully bituminous coated in accordance with the requirements of AASHTO M190. The pipe shall have an asphalt-paved invert.
- D. Concrete Block or Brick shall be solid and conform to ASTM C139 in design and manufacture. The block or brick shall be embedded in a mortar bed to form a one-half (1/2) inch mortar joint.

- E. Mortar used in brick masonry and joints shall be composed of one (1) part Portland cement and hydrated lime (not more than 10 percent lime, based on the volume of cement, shall be used) and two (2) parts sand. Portland cement shall meet the requirements of the latest ASTM specifications C-150, Type 1. The sand shall be composed of clean, hard and durable grains, and shall be of a quality and gradation approved by the Engineer. Hydrated lime shall meet the requirement of ASTM designation C-6. Mortar shall be mixed in a clean, tight mortar box or in an approved mechanical mixer and shall be used within 45 minutes after mixing.
- F. Precast Concrete Manholes shall meet ASTM C478 in design and manufacture holes and shall be in accordance with Town of Holly Springs Standard Details. The standard manhole joint shall be sealed with a plastic cement putty meeting Federal specification SS-S-00210 such as Ram-Nek or a butyl rubber sealant.
- G. Manhole Frames and Covers shall be cast iron or ductile iron with "Storm Sewer" stamped on the cover and four 1 inch perforated holes and shall be in accordance with Town of Holly Springs Standard Details. Castings shall be machined to give even and continuous bearing on the full length of the frame. Castings shall be free of porosity and blow holes, and shall receive one coat of Koppers Super Service Bitumastic black paint. Paint shall be kept off bolt threads, and surfaces shall be thoroughly wire brushed before painting.
- H. Manhole Steps shall be of composite plastic metal or steel reinforced polypropylene and shall be in accordance with Town of Holly Springs Standard Details. Steps shall be placed at sixteen (16) inches O.C. for the full depth in all structures when they are greater than five (5) feet in depth. Steps shall be designed for a vertical load of 400 pounds and a horizontal pull out load of 1,000 pounds.
- I. Yard Inlets, Catch Basins, and Curb Inlets shall be in accordance with Town of Holly Springs Standard Details.
 - i. Frame, Grate, & Hood shall be cast iron and meet the ASTM requirements set forth in the latest edition of the NCDOT "Standard Specifications for Roads and Structures" and the dimensional requirements set forth in the latest edition of the NCDOT "Roadway Standard Drawings." Grates shall be stamped with the appropriate NCDOT specification number as evidence of satisfying the above requirements. Hoods shall be stamped with either "Drains to Neuse River" or "Drains to Cape Fear River" or other wording as confirmed by the Engineer. Lettering shall be ¾" height and shall be clean, crisp, and free of defects.

PART 4 - CONSTRUCTION

- A. All storm sewers shall be laid to provide a “true line” between manholes or structures, and they shall be installed at each deflection of line and/or grade.
- B. The mortar for brick masonry shall conform to the requirements herein set forth. Excavation shall be made to the required depth and the foundation on which the brick masonry is to be laid shall be approved by the Inspector. The brick shall be laid so that they will be thoroughly bonded into the mortar joints by means of the “shove joint” method: (battered or plastered joints will not be permitted). The headers and stretchers shall be so arranged as to thoroughly bond the mass. Brickwork shall be of alternate headers and stretchers with consecutive courses in thickness. The joints shall be completely filled with mortar. No spalls or bats shall be used except for shaping round irregular openings or when unavoidable to finish out a course. Competent bricklayers shall be employed on the work and all details of construction shall be in accordance with approved practice and to the satisfaction of the Engineer.
- C. Manhole steps shall be set in the masonry as the work is built up, thoroughly bonded, and accurately spaced and aligned.
- D. Inverts in storm drainage structures shall be shaped to form a smooth and regular surface free from sharp or jagged edges. They shall be sloped adequately to prevent sedimentation.
- E. The castings shall be set in full mortar beds. All castings when set shall conform to the finished grade as established by the Engineer. Any castings not conforming shall be adjusted to the correct grade without extra compensation.
- F. All pipes entering catch basins or junction boxes shall enter through a wall and not through a corner of the structure. The pipe shall not project into the drainage structure, but shall be finished flush with the inside of the structure.
- G. When necessary, the contractor shall provide for the temporary diversion of water or dewatering in order to maintain the storm sewer foundations in a dry condition, and shall continue to maintain trenches in a dry condition until backfill and compaction activities are complete.
- H. The Contractor shall maintain all storm sewers in a condition such that they will function properly from the time the storm sewers are installed until the Town accepts the project. The Contractor shall thoroughly clean out all storm sewers at no expense to the owner throughout construction.

PART 5 - PAYMENT

A. Basis of Payment:

- i. Payment to furnish, excavate, install, and backfill storm drainage pipe shall be paid at the unit price bid for the actual number of linear feet of the size and type of pipe installed as indicated in the Itemized Proposal and shall include any washed stone necessary for stabilization, required paved inverts, pipe coating and shall be full compensation for all labor, equipment and materials necessary to install the pipe.
- ii. Payment to furnish, excavate, install and backfill around “Manholes,” “Yard Inlets,” “Catch Basins,” “Curb Inlets,” “Flared End Sections,” “Headwalls,” and other structures shall be paid at the contract unit price for each item installed as indicated in the Itemized Proposal and shall be full compensation for all labor, equipment, and material to furnish and install these structures including excavation and backfill.

END OF SECTION 09000

SECTION 13000
UTILITY WORK ALONG HIGHWAYS

PART 1 - GENERAL

- A. The Contractor shall furnish all labor, materials, tools, and equipment and perform all work and services necessary for, or incidental to, the furnishing and complete installation of all work along highways. Construction shall be as shown on drawings and as specified in accordance with provisions of the Contract Documents and completely coordinated with that of all other trades.
- B. Contractor shall obey all traffic laws and comply with all requirements, rules, and regulations of the North Carolina State Department of Transportation (NCDOT) and local authorities having jurisdiction, to maintain adequate warning signs, lights, barriers, etc., for the protection of traffic on public roadways.
- C. The Contractor shall maintain traffic and protect the public from all damage to persons and property within the contract limits, in accordance with the Contract Documents and all applicable state and local regulations. He shall conduct his operations so as to maintain and protect access, for vehicular and pedestrian traffic, to and from all properties adjoining or adjacent to those streets affected by his operations, and to subject the public to a minimum of delay and inconvenience. Suitable signs, barricades, railing, etc., shall be erected and the work outlined by adequate lighting at night. Danger lights shall be provided as required. Watchmen and flagmen shall be provided as necessary for the protection of traffic.
- D. Although such work is not specifically shown or specified, all supplementary or miscellaneous items, appurtenances, and devices incidental to or necessary for a sound, secure, and complete installation shall be furnished and installed as part of this work.
- E. Unless otherwise stated in the Encroachment Agreement, construction within ten (10) feet from the edge of pavement on a NCDOT maintained roadway shall be limited to the hours of 9:00 a.m. to 4:00 p.m.

PART 2 - QUALITY STANDARDS

- A. All work within the rights of way of the NCDOT shall be governed by the NCDOT, January 2024, "Standard Specifications for Roads and Structures." Work shall also comply with the TOHS "Engineering Design and Construction Standards". The stricter regulation shall apply.

PART 3 - JOB CONDITIONS

- A. The Contractor shall verify all existing conditions prior to beginning work within the rights of way of NCDOT. Any unusual conditions shall be brought to the attention of the Engineer.

PART 4 - WORK ALONG HIGHWAYS

- A. The Contractor will be required to replace all pavement cuts on account of this work. The Contractor shall also be entirely responsible for backfilling and maintaining the ditches cut along and across highways in accordance with the permits received from the NCDOT and as required by these specifications.
- B. Lines installed under major highways shall be constructed by boring under highway or tunneling as may be required by the NCDOT and these specifications.
- C. Where utility lines to be installed by the open-cut method pass under culverts on the NCDOT right of way, the Contractor shall fill the void from the bottom of the utility line to the spring line of the culvert with #57 stone. Wherever the distance between the bottom of the culvert and the top of the utility line exceeds the radius of the culvert, Contractor will compact soil around and above the utility line to 95% of maximum by modified proctor and place #57 stone from the spring line of the culvert to a depth below the bottom of the culvert at least equal to the culvert radius. Contractor shall include his charge for placing this stone in the pipe price.
- D. The Contractor shall conduct his work in accordance with the requirements of the NCDOT; in particular, he shall be required to control traffic in the vicinity of the work as required by the latest revision of the NCDOT "North Carolina Supplement to the Manual of Uniform Traffic Control Devices (MUTCD)." This publication may be obtained from the Traffic Engineering Branch, Division of Highways, North Carolina Department of Transportation. Contractor will be required to obtain and have in his possession one copy of the above referenced publication and to comply with the requirements therein.
- E. The use of this supplement manual does not preclude the use of the MUTCD, and it is recommended that the Traffic Control Chapters of the MUTCD be read before attempting any construction or maintenance signing. Any conflicts found to occur between the Supplement Manual and the MUTCD shall be resolved in favor of the MUTCD.

PART 5 - UNPAVED ROADWAYS

- A. Any unpaved road, side road, dwelling entrance road, commercial entrance, road shoulder, or any other area presently stabilized by use of rock material shall be protected from erosion during construction and shall be stabilized by the use of crusher run stone after backfilling. This stone stabilization shall be approximately four (4) inches thick unless otherwise directed by the Engineer.

PART 6 - OPEN CUTTING OF HIGHWAYS

- A. Open cuts of roadways should have vertical faces where soil and depth conditions permit. They shall be shored where necessary. All excess excavated material shall be removed and disposed of at a location to be provided by the Contractor outside the limits of the right of way in such a manner as not to interfere with the drainage of highways unless otherwise permitted or directed by the Division Engineer of NCDOT or his representative. Documentation of any such permission shall be provided to the Engineer.
- B. Wherever the traveled portion of the roadway is cut normal to the highway alignment, only one-half of the road width shall be obstructed at one time in order to maintain traffic. Before the other half is cut, the first opening shall be made usable, safe, and maintained for traffic. A trench made in the travel portion of the roadway, either normal or parallel, shall not be left open overnight except in an emergency and only then when adequate barricades, signs, and torches or lights are prominently displayed to protect the traveling public.
- C. Openings in the shoulders, side ditches and cut or fill slopes of the road shall be repaired to the satisfaction of the NCDOT Division Engineer and the Engineer.

PART 7 - PARALLEL TRENCHING

- A. Where the shoulder is open-cut parallel to the pavement, adequate barricades and warning signs are to be placed and, if necessary, watchmen and flagmen are to be employed to control traffic. If trenches are left open overnight, a sufficient number of barricades, signs and torches or lights must be prominently displayed so that the traveling public will be adequately protected.
- B. The following requirements are applicable where parallel trenches are made:

- i. Excavation material shall not be stored on the pavement if it can reasonably be handled otherwise. In cases where storing of excavated material on pavement is absolutely necessary, it shall be moved as quickly as practical, and the pavement shall be thoroughly cleaned. Sand or screenings shall be placed on the pavement before the excavated material to allow for better clean up.
- ii. Excavation in the immediate vicinity of drainage structures shall be made with special care so as not to damage or interfere with the use of the existing drainage facilities.
- iii. Drainage facilities that are inadvertently damaged by the Contractor must be repaired immediately at no additional expense to the Owner.
- iv. The bottom of the excavation for a parallel installation in rural areas, or elsewhere when space will permit, shall not be nearer the edge of the pavement (measured in a horizontal plane) than the depth of the excavations so that the theoretical slope from the edge of the pavement to the bottom of the ditch will be no steeper than a one-to-one slope. On paved sections under 24 feet in width, consideration shall be given for future widening and paving of shoulders. Where, in the opinion of the NCDOT Division Engineer and the Engineer, soil conditions are such that sheet pilings or other shorings are necessary, they shall be placed by the Contractor. The trench shall not be closer than 3 feet to the edge of the pavement except in special conditions approved by the NCDOT Division Engineer and the Engineer.
- v. Parallel open trench installations that involve possible damage in the event of rain or other precipitation, or which may be hazardous to traffic due to open trench, should be closed without undue delay. A trench should not remain open longer than 24 hours except with the approval of the NCDOT Division Engineer and the Engineer.

PART 8 - COMPACTION

- A. The backfill around and under pipes or other utility installations on all open-cut sections across or parallel to highways within construction limits shall consist of approved material free from rocks and in 6 inch loose layers, or other approved methods, and shall be compacted to at least 95% of standard density as determined by AASHTO Method T-99. When compacting in layers, each layer must be thoroughly tamped by a mechanical tamp before the next layer is placed. A pneumatic tamp, a gasoline ram type tamp, or a vibrating tamp will be required to meet the specifications of a "mechanical tamp." Other fill material shall be compacted to a density of no less than 90% of the maximum dry density as measured by AASHTO Method T-99. Backfill material shall be placed in lifts of 12

inches or less of the uncompacted soil. If backfill is in the area of future road widening suitable material shall be placed in a manner as to not require future undercut. If undercut is necessary in areas that have been previously backfilled, no payment shall be made.

PART 9 – GAS LINE COORDINATION

Contractors shall coordinate all work performed in the vicinity of Enbridge Gas facilities. Prior to excavation, grading, boring, or other construction activities near existing gas mains, service lines, or regulator facilities, contractors shall contact NC 811 and comply with all applicable utility notification requirements.

Contractors shall maintain a minimum separation of **12 inches** from Enbridge facilities at all times. A separation of **18 to 24 inches is preferred** wherever practical.

When excavating within the utility tolerance zone, contractors shall use hand tools or other approved non-mechanized excavation methods as required by NC 811 safe digging practices. The tolerance zone extends **24 inches on either side of the marked utility location**.

Any proposed blasting within **100 feet** of Enbridge Gas facilities requires prior approval from Enbridge Gas. An Enbridge representative must be onsite during blasting activities. Contractors shall coordinate blasting operations and obtain approval before commencing any blasting work.

For engineer and design coordination:

Nakima Bogan

Email: nakima.bogan@enbridge.com

Phone: (919) 819-4810

For field coordination, construction activities near gas facilities, and blasting approval:

Joe Lusk

Email: joe.lusk@enbridge.com

Phone: (919) 621-1059

END OF SECTION 13000

SECTION 16000
SOIL EROSION AND SEDIMENTATION CONTROL
(Revised 1-9-02)

PART 1 - GENERAL

- A. Temporary and permanent erosion control measures shall be provided for all land disturbing activities in accordance with the Contract Documents and/or an erosion control plan approved by the North Carolina Department of Environment and Natural Resources (NCDENR). Temporary measures shall be installed by the Contractor, then inspected by the Inspector and the NCDENR for compliance prior to any land disturbing activity. The inspection and approval process shall be required on each phase of construction. All permanent erosion control measures shall be incorporated into the work at the earliest practical time. All temporary measures shall be maintained until the permanent measures have taken effect. Temporary and permanent measures shall be coordinated to provide effective and continuous erosion control throughout the construction and post-construction period to minimize siltation of streams, lakes, reservoirs, and other impoundments, ground surfaces, and other property. These measures shall remain in effect until final approval for removal is given by the Inspector and/or the NCDENR at which time the Contractor shall remove all temporary erosion control measures at no additional cost to the Owner.
- B. The Contractor shall be familiar with the applicable provisions of the Sedimentation Pollution Control Act of 1973, General Statutes, Chapter 113A, Article 4. The Contractor shall be responsible for incorporating conservation procedures necessary to comply with this act in minimizing erosion and sediment pollution associated with the construction of this project as directed by the Engineer.
- C. The Contractor shall be financially responsible for any and all fines that result from the Contractor's failure to install and/or maintain erosion control measures in accordance with the Contract Documents.
- D. The Contractor shall check all erosion and sediment control measures for stability and operation following each rainfall event, and no less than once per week. The Contractor shall make any needed repairs immediately to maintain all control measures as designed.
- E. The Contractor shall clean out all sediment trapping devices when the device reaches 50% trap capacity and shall dispose of the sediment by spreading on the site in a protected area or by hauling away if not suitable for fill at no additional cost to the Owner.

PART 2 - TEMPORARY MEASURES

- A. Temporary Silt Fence shall be installed around inlets, at the toe of all fill slopes, and any other necessary locations as shown on the plans and as directed by the Engineer. Silt fence shall be erected in accordance with the Town of Holly Springs Standard Specifications and Details.
- B. Inlet Protection shall be installed around inlets and any other necessary locations as shown on the plans and as directed by the Engineer. Inlet protection shall be erected in accordance with the Town of Holly Springs Standard Specifications and Details.
- C. Diversion Ditches shall be installed at the top of cut and fill slopes and any other necessary locations as shown on the plans and as directed by the Engineer. Diversion ditches shall be installed in accordance with the Town of Holly Springs Standard Specifications and Details.
- D. Tree Protection Fence shall be installed around the drip line of trees in the construction work area as shown on the plans and as directed by the Engineer. The tree protection fence shall be installed in such a manner that it prevents all construction activities from encroaching into the area inside the drip line of the tree. The material and installation specifications for the tree protection fence shall be approved for use by the Engineer prior to installation.
- E. Construction Entrances shall be installed at all points of access to the construction site. Any access point, which does not have a construction entrance, shall be barricaded to prevent its use. Construction entrances shall be installed in accordance with the Town of Holly Springs Standard Specifications and Details. Construction entrances shall be included in the unit bid price for "Mobilization."
- F. Sediment and Filter Basins shall be installed at all points where accumulated runoff is released to natural drainage channels as shown on the plans and as directed by the Engineer. Sediment pits and filter basins shall be sized to hold 1800 cubic feet of sediment for every acre of denuded area tributary to the structure. Sediment and filter basins shall be installed in accordance with the Town of Holly Springs Standard Specifications and Details.
- G. Catch Basin Risers/Filters shall be installed at proposed catch basin locations or at other necessary locations as shown on the plans and as directed by the Engineer. Catch basin risers/filters shall be erected in accordance with the Town of Holly Springs Standard Specifications and Details.
- H. Check Dams shall be installed in ditches and at other necessary locations as shown on the plans and as directed by the Engineer. Check dams shall be erected in accordance with the Town of Holly Springs Standard Specifications and Details.

- I. Basis of Payment: Payment for temporary erosion control measures shall be at the contract unit price for each item as indicated on the Itemized Proposal in the contract documents. These prices will be full compensation for all work covered by this section including but not limited to the labor, equipment, and materials for furnishing and installing all temporary erosion control measures indicated on the plans, and maintenance of the work throughout the life of the project as required by the Inspector.

PART 3 - TEMPORARY AND PERMANENT NON LAWN SEEDING MEASURES

A. General:

- i. After construction is complete in any area or phase of the project, the disturbed areas shall receive a permanent ground cover. Seeding and mulching shall be performed immediately behind construction. The Contractor shall provide permanent seeding in all disturbed areas as indicated in the Contract Documents. The Contractor shall adapt permanent seeding operations to protect and to accommodate any temporary seeding and soil and erosion control measures that may already be in place during the work period.
- ii. When seeding must take place out of season for permanent grass the appropriate temporary seeding shall be done and the contractor shall be responsible for permanent seeding as specified in season at no additional cost to Owner.
- iii. Contractor shall be responsible for turf maintenance through substantial completion. Slopes must be at 90% coverage at substantial completion review to be accepted. If not at 90% coverage, substantial completion will be delayed until the following growing season.

B. Site Preparation and Installation:

- i. Ground Cover: All disturbed areas shall be dressed to a depth of five (5) inches. The top two (2) inches shall be pulverized to provide a uniform seedbed. Rake or harrow the site to establish a smooth and level final grade. Soil particles should be no larger than marble size, and pea gravel size is even better. Agricultural lime shall be applied at the rate of 95 lbs./1000 sq. ft. immediately before plowing. Grass seed shall be applied at the rates outlined in Tables 1 and 2.
- ii. 5-10-10 fertilizer shall be applied to all disturbed areas at a rate of 21 lbs./1000 sq. ft. Mulching shall consist of small grain straw applied at

a rate of 70 lbs./1000 sq. ft. Mulched areas shall be tacked with asphalt or other approved method sufficient to hold the straw in place, at a rate of 150 to 200 gallons per ton of straw.

- iii. If active construction ceases in any area for more than thirty (30) days, all disturbed areas must be seeded, mulched, fertilized and tacked at no additional cost to the Owner.
- iv. Some areas may require temporary seeding due to an interruption of work exceeding thirty (30) days or seasonal restrictions as specified in the permanent seeding schedule, or a combination thereof. These areas shall be reseeded in accordance with the permanent seeding schedule. If temporary seeding is required due to Contractor delays, there will be no compensation for the temporary seeding. Temporary seeding shall be performed only at the direction of the Engineer or Inspector.
- v. When seeding must take place out of season for permanent grass the appropriate temporary seeding shall be done and the contractor shall be responsible for permanent seeding as specified in season at no additional cost to Owner.

C. Cleanup and Inspection:

- i. Upon completion of work, the Contractor shall remove from the site all equipment and other articles used. All excess soil, stone, and debris shall be removed and legally disposed of at no additional cost to the Owner. All work areas shall be left in a clean and neat condition. All damage to existing construction caused by landscaping operations shall be repaired to the satisfaction of the Town at the Contractor's expense.
- ii. Seeded areas shall be protected and replanted as necessary to establish a uniform stand of specified grass. Scattered bare spots, none of which shall be larger than one (1) square foot, will be allowed up to a maximum of 3% of the seeded area for each property. When seeded areas are ready for inspection, the maintained turf areas shall be neatly mowed to the uniform height of approximately two and one-half (2.5) inches. The lawns shall be considered established only when the specified grass is vigorous and growing well in addition to meeting the other requirements specified.
- iii. An inspection of the completed seeding shall be made at the conclusion of the landscape work upon written notice requesting such inspection submitted by the Contractor to the Engineer, at least ten (10) days prior to the anticipated date of inspection.
- iv. A final inspection shall be performed when a satisfactory stand of seeded turf grass has been produced, upon written notice requesting such

inspection submitted by the Contractor to the Engineer, at least ten (10) days prior to the anticipated date of inspection. If a satisfactory stand of turf has not been produced at the time of final inspection, necessary repairs shall be performed in conformance with the requirements of this section. Upon completion of these repairs, the seeded grass shall be reinspected upon written notice as above.

D. Basis of Payment:

- i. Payment for establishing permanent and temporary ground cover shall be the actual amount of seeding installed and will be paid for at the unit price bid per acre or square yard as indicated on the Itemized Proposal in the contract documents for "Temporary Mulching, Seed for Temporary Seeding, and Fertilizer for Temporary Seeding". These prices shall be full compensation for all work covered by this section including but not limited to furnishing all permanent and temporary seeding, mulching, fertilizing, tacking, site preparation, cleanup, maintenance, and warranty of work as specified.
- ii. Distribution of Billing and Payments for "Non Lawn Seeding and Mulching" and/or "Temporary Seeding and Mulching" shall be made as follows:
 - a) Fifty percent (50%) of the total quantity of the seeding and mulching items on the Itemized Proposal on the first partial payment estimate after which the initial seeding has been completed and accepted.
 - b) Twenty-five percent (25%) of the total quantity of the seeding and mulching items on the Itemized Proposal on the first partial payment estimate made after which the initial establishment of grass and any required reseeding is complete.
 - c) Twenty-five percent (25%) of the total quantity of the seeding and mulching items on the Itemized Proposal on the first partial payment after the final establishment of grass and the project is one hundred percent (100%) complete.

TABLE 1		
SHOULDERS, SIDE DITCHES, SLOPES (For Slopes Between 2:1 and 3:1)		
Date	Type	Planting Rate
Mar 1 - June 1	Sericea Lespedeza (scarified) and	50 lbs./acre
Mar 1 - Apr 15	Add Tall Fescue or	120 lbs./acre
Mar 1 - June 30	Add Weeping Lovegrass or	10 lbs./acre
Mar 1 - June 30	Add Hulled Common Bermudagrass	25 lbs./acre

June 1 - Sept 1	***Tall Fescue and ***Browntop Millet or ***Sorghum-Sudan Hybrids	120 lbs./acre 35 lbs./acre 30 lbs./acre
Sept 1 - Mar 1	Sericea Lespedeza (unhulled/unscarified) and Tall Fescue	70 lbs./acre 120 lbs./acre
Nov 1 - Mar 1	Add Abruzzi Rye	25 lbs./acre
TABLE 2		
SHOULDERS, SIDE DITCHES, SLOPES (For Slopes 3:1 and Flatter)		
Date	Type	Planting Rate
Aug 15 - Nov 1	Tall Fescue	300 lbs./acre
Nov 1 - Mar 1	Tall Fescue and Abruzzi Rye	300 lbs./acre
Mar 1 - Apr 15	Tall Fescue	300 lbs./acre
Apr 15 - June 30	Hulled Common Bermudagrass	25 lbs./acre
July 15 - Aug 15	Tall Fescue and ***Browntop Millet or ***Sorghum-Sudan Hybrids	35 lbs./acre

Notes:

Consult Stormwater Management Engineer or Natural Resources Conservation Service (NRCS) for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those, which do well under local conditions; other seeding rate combinations may be possible but must be approved by the Engineer.

***Temporary - Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow over 12 inches in height before mowing to keep fescue from being shaded out.

PART 4 - PERMANENT LAWN SEEDING MEASURES

A. General

- i. The following information shall be applicable for all permanent lawn seeding. Permanent lawn seeding shall take place within all developed areas of disturbance including residential and commercial areas and shall be replaced in kind of existing material by the Contractor. An approved turf type tall fescue blend shall be used per the Contract Documents. Kentucky 31 is not an acceptable blend.
- ii. When seeding must take place out of season for permanent grass the appropriate temporary seeding shall be done and the contractor shall be responsible for permanent seeding as specified in season at no additional cost to Owner.
- iii. Contractor shall be responsible for lawn maintenance through substantial completion. Lawns must be at 90% coverage at substantial completion review to be accepted. If not at 90% coverage, substantial completion will be delayed until the following growing season.

B. Site Preparation:

- i. Remove or kill any undesirable existing turf or vegetation. Herbicide spraying or other chemical treatment shall be approved by the Engineer prior to being used by the contractor. If preexisting turf or other vegetation is mixed with the soil to be reused, the contractor shall use best judgement in removing it or incorporating it into the soil during preparation.
- ii. If topsoil was not used to reestablish the upper soil layer and the upper soil is heavy with high clay content, spread 1.5-2 inches of aged ground pine bark or bagged organic humus over the area to be repaired.
- iii. For all grasses except centipedegrass, apply per 1,000 square feet: 75 pounds of ground limestone and one of the following fertilizers: 40 pounds of 5-10-10; 20 pounds of 10-20-20; or 20 pounds of 8-8-8 or 10-10-10 in combination with 4 pounds of 0-46-0. Centipedegrass prefers acidic soils and low levels of phosphorus and may not require the addition of lime and phosphorus.
- iv. Incorporate lime and fertilizer (and pine bark if added) into the top 6 inches of the soil using a rototiller or by hand. Rototill or hand cultivate to well incorporate the amendments and get a uniform loosely textured soil of minimum 6-inch depth.
- v. Rake or harrow the site to establish a smooth and level final grade. Soil particles should be no larger than marble size, and pea gravel size is even better. Hand raking to level the soil and work out hills and hollows. For areas larger than 100 sq. ft. allow rain or irrigate to settle the soil. In some situations, the Engineer may require rolling or cultipacking to firm the soil before seeding. Hand rake again to break up the crusty surface before seeding or planting.

C. Installation:

i. General:

- a) Seed or plant the required grass according to Table 3.
- b) The choice of turfgrass type, variety and propagation form shall be specified in the Contract Documents, as specified in the Itemized Proposal, or as designated by the Engineer.
- c) Seed shall be tagged certified seed. Germination shall be a minimum of 95%. Seed shall be 98% pure with less than 2% other-crop seed or debris. Seed shall be free of noxious weed seed.

- d) Sod, sprigs, plugs or other vegetative plant propagation materials shall be certified free of noxious weeds. Materials shall be in good health and vigor, free of disease or pests, or damage from dryness, adverse temperature, herbicides, fertilizer or other chemicals. Sprigs that are older than 48 hours are not acceptable regardless of condition.
- e) The Contractor shall maintain a log of dates that sod, sprigs, plugs, or other seeding installation was completed for each individual property and shall notify the Engineer or Inspector of each day's progress.

ii. Seeding:

- a) Sow the seed on freshly prepared soil. Ensure uniform coverage by using a centrifugal (rotary) or drop-type spreader. Areas larger than 100 sq. ft. shall be seeded with a minimum of two passes at the appropriate partial rate for each pass. For areas averaging greater 15 ft. width, apply half the seed in one direction and the other half at right angles to the first direction.
- b) Apply a starter-type fertilizer to the soil surface for example, 10 pounds of 5-10-10 or 5 pounds of 10-20-20 per 1,000 square feet at the time of seeding.
- c) Lightly cover the seed by hand raking or dragging with a mat or chain-link fence. Roll or tamp the soil lightly to firm the surface and provide good seed-to-soil contact.
- d) Mulch grass seed with weed-free small grain straw or hay. Use one bale per 1,000 square feet for warm-season grasses and 1 to 2 bales for cool-season grasses. Stabilize small areas of mulch by rolling, watering or tacking with asphalt tacking spray. Twine netting can be used if wind displacement is a problem. If applied evenly and lightly, these materials need not be removed. Larger areas shall be stabilized by asphalt tacking spray or twine netting.

ii. Sprigging or Broadcasting:

- a) Sprigging is the preferred method of installing bermudagrass in larger areas. For smaller areas of bermudagrass, sprigging and plugging are both good options. The less expensive is preferred. In some cases sod may be less expensive or necessary due to circumstances.
- b) Broadcasting sprigs uniformly over the entire area. Bermudagrass or zoysiagrass sprigs shall be broadcast at a minimum rate of 5 bushels (yards) of sprigs per 1,000 square feet. Up to 10 bushels (yards) may be used where very fast cover is desired. Press the sprigs into the top ½ to 1 inch of soil by hand, and then by using an old disk, set straight.

In the case of very large areas use a sprigging machine, cultipacker, or roller. (Note - St. Augustinegrass is seldom established through broadcasting because the stems are too sensitive.)

iii. Plugging:

- a) Plugging is the preferred method of installing zoysia and St. Augustine except where sprigging or sod is less expensive or necessary due to circumstances.
- b) Plugs shall consist of individual pieces of sod that are 2 inches or larger. The plugs shall be planted at grade on 8 inch centers.

iv. Sodding:

- a) Lay sod as soon as possible after it has been harvested to prevent injury. Sod should be installed within 24 hours of delivery. While installing, take action as necessary to prevent heat buildup within the unlaied sod. Plan to unstack and unroll the sod if it cannot be laid within 48 hours. Soil should be moist (but not overly wet) before laying sod. Irrigating the soil several days before delivery is often adequate.
- b) Start sodding from a straight edge (driveway or sidewalk) and butt strips together, staggering them in a brick-like pattern. Avoid stretching sod. Use a knife or sharp spade for trimming to fit irregularly shaped areas. Lay sod lengthwise across the face of slopes and peg or stake the pieces to prevent slippage. After the sod has been placed, roll the lawn to ensure good sod-to-soil contact.
- c) Water sod immediately after installation. Soak sod thoroughly enough to penetrate soil below the newly installed sod to a minimum depth of two (2) inches. Contractor is responsible for insuring adequacy of water supply. The Contractor shall provided any necessary temporary means to properly water sod, including temporary pumps and sprinklers. Proper irrigation shall be required by the contractor until the project has been inspected and is accepted by the Town of Holly Springs. (The Contractor shall be required to obtain all applicable watering permits from the Town of Holly Springs prior to beginning watering activities.)
- d) In some cases sod can be laid in space planting "semi-checkerboard" fashion in order to lower costs. This method is described here assuming that the sod is cut into the standard 18 in. x 24 in. size. The first piece of sod is laid with the narrow side flush to a straight edge. This will start a row that is 24 in. wide. The next piece of sod is laid likewise but it is spaced 9 in. away and parallel to the first piece along the longer side. This is continued to make the first row. The next row is laid flush with the previous and in the same fashion except it laid

offset by 9 inches, i.e. laid beginning at the centerline of the first piece of sod in the previous row. Subsequent rows are laid in this alternating pattern.

D. Cleanup and Inspection:

- i. Upon completion of work, the Contractor shall remove from the site all equipment and other articles used. All excess soil, stone, and debris shall be removed and legally disposed of at no additional cost to the Owner. All work areas shall be left in a clean and neat condition. All damage to existing construction caused by landscaping operations shall be repaired to the satisfaction of the Town at the Contractor's expense.
- ii. Seeded areas shall be protected and replanted as necessary to establish a uniform stand of specified grass. Scattered bare spots, none of which shall be larger than one (1) square foot, will be allowed up to a maximum of 3% of the seeded area for each property. When seeded areas are ready for inspection, the maintained turf areas shall be neatly mowed to the uniform height of approximately two and one-half (2.5) inches. The lawns shall be considered established only when the specified grass is vigorous and growing well in addition to meeting the other requirements specified.
- iii. An inspection of the completed seeding shall be made at the conclusion of the landscape work upon written notice requesting such inspection submitted by the Contractor to the Engineer, at least ten (10) days prior to the anticipated date of inspection.
- iv. A final inspection shall be performed when a satisfactory stand of seeded turf grass has been produced, upon written notice requesting such inspection submitted by the Contractor to the Engineer, at least ten (10) days prior to the anticipated date of inspection. If a satisfactory stand of turf has not been produced at the time of final inspection, necessary repairs shall be performed in conformance with the requirements of this section. Upon completion of these repairs, the seeded grass shall be reinspected upon written notice as above.

E. Basis of Payment:

- i. Payment for establishing permanent lawn ground cover shall be the actual amount of seeding, sprigging or broadcasting, plugging, and/or sodding installed and will be paid for at the unit price bid per acre or square yard for the appropriate method and grass type as indicated on the Itemized Proposal in the contract documents for "Seeding and Mulching." This price shall be full compensation for all work covered by this section including but not limited to furnishing all permanent and temporary seeding, sprigging or broadcasting, plugging, sodding

mulching, fertilizing, tacking, watering, site preparation, cleanup, maintenance, and warranty of work as specified.

ii. Distribution of Billing and Payments for “Seeding and Mulching” shall be made as follows:

- a) Fifty percent (50%) of the total quantity of the seeding and mulching items on the Itemized Proposal on the first partial payment estimate after which the initial seeding has been completed and accepted.
- b) Twenty-five percent (25%) of the total quantity of the seeding and mulching items on the Itemized Proposal on the first partial payment estimate made after which the initial establishment of grass and any required reseeding is complete.
- c) Twenty-five percent (25%) of the total quantity of the seeding and mulching items on the Itemized Proposal on the first partial payment after the final establishment of grass and the project is one hundred percent (100%) complete.

TABLE 3				
LAWN SEEDING (Cool- and Warm-Season Grasses)				
	Typical Planting Rate/1,000 sq. ft.			
Lawn Grass	Planting Dates¹	Seeds²	Space Planting³	Sprigging⁴
Tall fescue	March 1 to Oct. 15 (Aug. 15 to Oct. 1 optimum)	6	-	-
Tall fescue/annual (winter) rye	Oct. 15 to March 1	6 fescue 1 rye		
Bermudagrass(seed)	Apr. 1 to Aug. 15	1 to 2	-	-
Bermudagrass (vegetative)	Apr. 15 to Aug. 30	-	5 ⁴	5
Centipedegrass	March to July	0.25 to 0.50	5 ⁴	-
Zoysiagrass	April to July	-	5 ⁴	5
St. Augustinegrass	Apr. to July	-	5 ⁴	-

Notes:

- ¹ Sod consisting of cool-season grasses can be installed anytime the ground is not frozen. Sod consisting of warm- season grasses can be installed as long as soil temperature exceeds 55° F. (typically April 15 to Oct. 1)
- ² Pounds of seed per 1,000 sq. ft.
- ³ Square yards of turf cut into 2-inch centers to plant 1,000 sq. ft.

- ⁴ Bushels of sprigs per 1,000 sq. ft. (1 sq. yd. of turf pulled apart is equivalent to 1 bushel of sprigs.)

PART 5 - MATting FOR EROSION CONTROL

- A. Matting for erosion control shall be jute matting or excelsior matting. Matting for erosion control shall not be dyed, bleached, or otherwise treated in a manner that will result in toxicity to vegetation.
- B. Jute Matting: Jute matting shall be of a uniform open plain weave of single jute yarn, forty-eight (48) inches in width, plus or minus one (1) inch. The yarn shall be of a loosely twisted construction and shall not vary in thickness by more than one-half its normal diameter. There shall be 78 warp ends, plus or minus 2, per linear yard; and the weight shall average 1.22 pounds per linear yard of the matting with a tolerance of plus or minus 5 percent.
- C. Excelsior Matting: Excelsior matting shall consist of a machine-produced mat of curled wood excelsior at least 47 inches in width. The mat shall weigh 0.975 pounds per square yard with a tolerance of plus or minus 10 percent. At least 80% of the individual excelsior fibers shall be 6 inches or more in length. The excelsior fibers shall be evenly distributed over the entire area of the blanket. One side of the excelsior matting shall be covered with a woven fabric of twisted paper cord or cotton cord, or with an extruded plastic mesh. The mesh size for either the fabric or plastic mesh shall be a minimum of 1" x 1" and a maximum of 1-1/2" x 3".
- D. Wire Staples: Staples shall be machine-made of No. 11 gage new steel wire formed into a "U" shape. The size when formed shall be not less than 6 inches in length with a throat of not less than 1 inch in width.
- E. Basis of Payment: Payment for erosion control matting shall be based on the actual quantity of matting in square yards installed in accordance with the project Contract Documents and per unit price indicated on the Itemized Proposal for "Matting For Erosion Control."

PART 6 - RIPRAP DISSIPATION PADS

- A. After construction is complete, all points of stormwater release shall be protected by riprap dissipation pads.
- B. Stone for plain riprap shall consist of field stone or rough unhewn quarry stone. The stone shall be sound, tough, dense, resistant to the action of air and water, and suitable in all other respects for the purpose intended. Stone shall vary in weight from 5 to 200 pounds. At least 30 percent of the total weight of the riprap shall be in individual pieces weighing a minimum of 60 pounds each. Not more than 10 percent of the total weight of the riprap may be in individual pieces weighing less than 15 pounds each.

- C. Unless otherwise directed by the Engineer, the stone shall be placed on a flat slope or as indicated on the plans. The stone shall be graded so that the smaller stones are uniformly distributed throughout the mass.
- D. The Contractor may place the stone by mechanical methods, augmented by hand-placing where necessary, provided that when the riprap is completed it forms a properly graded, dense, neat layer of stone.
- E. The completed riprap shall be at least the thickness indicated on the plans, with the top of the riprap pad flush with the surrounding finished grade.
- F. Geotextile fabric consisting of Mirafi 140N or equivalent shall be installed under all riprap unless otherwise noted. No direct payment shall be made for geotextile fabric. The price for geotextile fabric used under riprap shall be included in the unit price bid for "Riprap."
- G. Basis of Payment: Payment for riprap shall be based on the actual quantity of riprap in tons provided and per the unit price for the appropriate class as indicated on the Itemized Proposal in the Contract Documents for "Erosion Control Stone Class A or B". The unit prices and payments for "Erosion Control Stone Class A or B" will be full compensation for all work covered by this section including, but not limited to, all excavation, embankment preparation, backfilling, and furnishing and placing riprap and other materials.

PART 6 - LEVEL SPREADERS

- A. Level spreaders shall be constructed in accordance with the most current Town of Holly Springs, NCDOT, and NCDENR standards.

Basis of Payment: Payment for "Level Spreader" shall be made under the contract unit price bid per linear foot for the type of level spreader as indicated on the plans and in the Itemized Proposal. The unit prices and payments shall be full compensation for all labor, equipment, and materials necessary to properly install and maintain the level spreader in accordance with the Contract Documents and shall also include any necessary clearing and grubbing, grading, seeding and mulching and other incidentals to satisfactorily install level spreaders.

END SECTION 16000

SECTION 18000
PAVEMENT MARKINGS

(Revised 1-9-02)

PART 1 - GENERAL

- A. All work associated with the furnishing, installing and removing of pavement markings and pavement markers shall be performed in accordance with these contract documents and the latest publication of the North Carolina Department of Transportation "Standard Specifications for Roads and Structures" and "Roadway Standard Drawings." Permanent Pavement Markings shall be Alkyd/Maleic Thermoplastic.

PART 2 - PAYMENT

- A. Basis of Payment: Payment for pavement markings and pavement markers shall be as indicated on the Itemized Proposal in the Contract Documents.

END OF SECTION 18000

SECTION 20000
CONSTRUCTION TRAFFIC CONTROL
(Revised 1-9-02)

PART 1 - GENERAL

- A. The work covered by this section consists of furnishing, erecting, maintaining, relocating, and removing traffic control devices in accordance with the Contract Documents as well as the latest versions of the NCDOT "Standard Specifications for Roads and Structures," NCDOT "Roadway Standard Drawings Manual," MUTCD, NCDOT Supplement to the MUTCD, or as directed by the Engineer.
- B. All traffic control devices furnished by the Contractor shall remain the property of the Contractor, unless otherwise specified by the contract. Traffic control devices shall include, but are not limited to signs, drums, barricades, barriers, electronic variable message boards, cones, delineators, flashing arrow panels, temporary guardrails, temporary concrete median barriers, vehicle-mounted temporary impact attenuators, pavement markings, raised reflective pavement markers, flaggers, and pilot vehicles.

PART 2 - MATERIALS - GENERAL

- A. Unless otherwise required, materials used in the fabrication and installation of construction traffic control devices shall be in accordance with the applicable provisions of the MUTCD. When traffic control devices are no longer required for traffic handling in the initial phase of construction requiring their use, they may be reused at various locations throughout the project provided the device is not defaced, is structurally sound, clean and otherwise conforms to the above requirements.
- B. All enclosed lens (Engineer's Grade) sheeting required for use on traffic control devices shall have an identification mark on the surface. This mark signifies that the sheeting meets the requirements of Federal Specification L-S-300C for Minimum Reflectivity 1 Sheeting and Tape. The identification mark shall not interfere with the function of the device, but shall be visible both day and under illumination at night without the use of special devices. No work on the project shall start until all the traffic control devices required for the particular work activity are inspected and approved by the Engineer.
- C. Traffic control devices which do not meet the requirements of this section shall not be used. If a device ceases to meet the requirements of this section during the project, it shall be promptly removed and replaced with a conforming device at no additional compensation. The Engineer shall have the authority to determine the acceptability of the traffic control devices.

PART 3 - CONSTRUCTION METHODS - GENERAL

- A. Existing public streets or highways shall be kept open to traffic at all times by the Contractor unless permission to close these streets, or portions thereof, is granted by the Engineer.
- B. Traffic control devices shall be installed at the inception of construction operations, and shall be properly maintained, relocated as necessary, cleaned, and operated during the time they are in use. They shall remain in place only as long as they are needed and shall be immediately removed thereafter. Where operations are performed in stages, only those devices that apply to the conditions present shall be left in place.
- C. The location, legends, sheeting, dimension, number of supports, and horizontal and vertical placement of warning signs, barricades, and other traffic control devices shall be as required by the plans or the MUTCD or as directed by the Engineer. The Contractor may submit for the Engineer's consideration a method for handling traffic other than as shown on the plans. The alternate traffic control plans shall not be used until they are approved in writing by the Engineer. During periods when not warranted, warning signs and other devices shall be removed from the work area, covered with specified material, or otherwise positioned so that they do not convey their message to the traveling public. If covered, the covering material shall be exterior plywood and shall cover the entire face of the sign panel. The covering material shall be installed in such a manner that the sign panel will not be defaced. Non-metal washers or other spacing devices shall be used to keep the plywood covering material from direct contact with the sign panel. Covering material shall be maintained in a neat manner during its use.
- D. Weeds, brush, trees, construction materials, equipment, etc. shall not be allowed to obscure any traffic control device in use. There will be no separate compensation for any trimming or cutting required for this purpose.
- E. Competent and properly trained flaggers, properly attired and equipped, shall be provided when directed by the Engineer or when the Contractor deems it necessary to safely handle traffic through the construction zone.
- F. The Contractor shall assume full responsibility for the continuous and expeditious maintenance of all construction warning signs, barricades, and other traffic control devices which in the opinion of the Engineer are damaged by traffic or other means or deteriorated beyond effectiveness. Conditions covered under maintenance shall include but not be limited to replacement due to loss of reflectivity; replacement of broken supports; plumbing of leaning

signs; cleaning of dirty signs, barricades, and other devices; repair of defaced sheeting and legend; and replacement of stolen or vandalized items. All items used for traffic control shall be maintained in a satisfactory condition. Failure to maintain all traffic control devices in a satisfactory condition may be cause for suspension of construction operations until proper traffic control is re-established.

- G. The Contractor shall follow the construction procedure and maintenance of traffic as shown on the Traffic Control Plan, unless a more workable plan is agreed to by the Engineer prior to or during the execution of the work. The Contractor shall complete each construction phase in the sequence shown (Example: Phase I-A must be completed before I-B).
- H. Work on the project shall not start until all the traffic control devices required for the particular work activity have been inspected and approved by the Engineer.
- I. The Contractor shall continuously review and maintain all traffic control measures to assure that adequate provisions have been made for the safety of the public and workers.
- J. The Contractor shall furnish a material certification for all new and used reflective sheeting.

PART 4 - PAYMENT

A. Basis of Payment:

- i. Payment for traffic control shall be made as designated on the Itemized Proposal. Payment will include all work covered by this section. If no item is included for traffic control devices in the "Itemized Proposal," all traffic control devices must be placed, and no direct payment shall be made. Payment will be full compensation for all work of furnishing, erecting, relocating, maintaining and removing any and/or all temporary traffic control devices.
- ii. If traffic control measures are designated separately on the Itemized Proposal, measurement and payment shall be made as follows:
 - a) "Work Zone Signs (Stationary) and (Portable)" will be paid by the actual number of square feet of sign panels installed at each location required by the contract. Where a particular sign is used at more than one location, measurement will be made at each location.

- b) “Drums” and “Cones” shall be paid by the maximum number of drums and/or cones acceptably placed at any one time during the life of the project as required by the contract.
- iii. Payment for “Stationary Construction Signs”, “Drums”, “Cones” and “Work Zone Signs (Stationary) and (Portable)” shall be made as follows:
 - a) Fifty percent (50%) of the total quantity of each item on the Itemized Proposal on the first partial payment estimate after which said item(s) have been placed into operation.
 - b) Twenty-five percent (25%) of the total quantity of each item on the Itemized Proposal on the first partial payment estimate made after the project is 50% complete.
 - c) Twenty-five percent (25%) of the total quantity of each item on the Itemized Proposal on the first partial payment after the project is one hundred percent (100%) complete.

END OF SECTION 20000

**SECTION 21000
WATER DISTRIBUTION**

SUB-INDEX

21000.01 WATER DISTRIBUTION PIPE

- A. General**
- B. Design**
- C. Material**
- D. Installation**

21000.02 FIRE HYDRANTS

- A. Location**
- B. Specifications**
- C. Installation**
- D. Relocation**
- E. Fire Flow Requirements for Buildings**

21000.03 VALVES AND APPURTENANCES

- A. Location**
- B. Specifications**
- C. Installation**

21000.04 WATER SERVICE TAPS

- A. Materials**
- B. Individual Water Services**

**21000.05 CLEARANCE BETWEEN WATER MAINS, SANITARY AND
STORM SEWERS**

21000.06 BACKFLOW PREVENTION AND CROSS CONNECTION

- A. General**

21000.07 AUTOMATIC FIRE SPRINKLER SYSTEMS

- A. General**
- B. Design**
- C. Post Indicator Valve**
- D. Backflow Prevention**
- E. Fire Department Connection**

- F. Dedicated Riser Room**
- G. Access**
- H. Identification**
- I. Installation**
- J. Fire Alarm Panel Location**

21000.08 FIRE DEPARTMENT ACCESS

- A. Fire Access and Fire Lanes**
- B. Gates**
- C. Two Points of Access**
- D. Fire Lanes**
- E. Fire Safety During Construction**

21000.09 TESTING AND INSPECTION

- A. Hydrostatic Testing**
- B. Chlorination**
- C. Bacteriological Sampling**

21000.10 FIRE PROTECTION DURING CONSTRUCTION

21000.11 IRRIGATION SYSTEMS

21000.12 REPAIR OF WATER LINES

SECTION 21000

WATER DISTRIBUTION

21000.01 WATER DISTRIBUTION PIPE

A. General

Water system expansions shall meet all requirements of these standards. In addition, the *North Carolina Administrative Code Title 15A Chapter 18 Subchapter C – Water Supplies* (15A NCAC 18C) is hereby incorporated into the Town’s standards for water system expansions. This specification section identifies minimum equipment and construction requirements for water system expansions that are to be owned and operated by the Town of Holly Springs. This section does not address every aspect of water system expansion; it is the design engineer’s (Designer’s) responsibility to supplement these requirements as necessary to produce a complete set of plans and specifications.

All utility extension permits must be obtained prior to construction. Refer to the Town Code of Ordinances Section 16 for further requirements.

B. Design

Location: Water lines shall be extended along the entire roadway frontage length of any proposed project. All public water mains shall be located within dedicated right of way or dedicated easements with a minimum width of 20 feet. Landscape plantings, fences, or structures shall not be allowed within water line easements.

Sizing: Water lines shall be sized in accordance with the Town’s “Comprehensive Plan” or as directed by the Executive Director of Utilities and Infrastructure Services. In residential areas, mains shall be 6-inch and 8-inch diameters. Six-inch mains shall be used only when a good grid exists. The total maximum length of 6-inch and 8-inch line, without connection to a larger main, is 1200 feet and 2000 feet, respectively. Four-inch water mains are permitted on residential cul-de-sacs less than 400 feet long, if no hydrant is required. Where a sufficient grid network does not exist, lines shall be upsized additionally to provide adequate fire flow as directed by the Executive Director of Utilities and Infrastructure Services. If there is adjacent developable property, an adequate size line to properly serve future development shall be provided sufficient for any future project to meet Town standards.

C. Material

All water mains shall be ductile iron. The use of Polyvinyl Chloride (PVC) pipe must be approved by the Executive Director of Utilities & Infrastructure Services,

and, if approved, must be blue in color and conform to the specifications of AWWA C900. The Engineering Department will maintain a list of approved manufacturers of other water distribution products. New manufacturers must submit requests for approval to the Engineering Department. Additional information such as catalogs, list of installations in the area, or material samples may be required. A written response will be mailed to the applicant accepting or rejecting the product within 90 days of the receipt of all necessary information.

Ductile Iron Pipe shall be designed and manufactured in accordance with AWWA C150 and C151 for a laying condition Type 2 and a working pressure as follows:

3-12 inches	350 psi
14-20 inches	250 psi
24 inches	200 psi
30-54 inches	150 psi

Pipe Joints shall be of the push-on type as per AWWA C111. Pipe lining shall be cement mortar with a seal coat of bituminous material in accordance with AWWA C104. Galvanized steel pipe will not be allowed as a material for water mains or water services lines.

Steel Encasement for water/sewer pipes are required for the following Street Classifications to avoid traffic disruption in the future:

- Controlled Access Highway

For carrier pipes that employ cathodic protection anticorrosion systems, the carrier and casing pipes shall be effectively insulated from one another. Carrier and casing shall be cathodically protected as a unit.

See Section 5.03 Boring and Jacking for more casing pipe size requirements.

D. Installation

Ductile iron pipe shall be manufactured and installed in accordance with requirements set forth in the most recent revision of AWWA C600/C605 and the Rules Governing Public Water Systems. Materials shall be handled in such a manner to protect them from damage at all times.

All water mains shall be installed with a minimum cover of 4 feet and maximum of 6 feet measured from the top of the pipe to the finished surface grade (or as otherwise directed by Executive Director of Utilities and Infrastructure Services). Where waterlines cross NCDOT roadways or major Town roadways, as determined by the engineer, pipe encasement shall be required. When water lines are installed along a roadway which does not have curb and gutter or which are planned to be widened in the future, the water line shall be installed at 4.5 feet minimum depth below edge of existing pavement. In addition, all waterline installation shall be

placed to prevent conflict with future road improvements or foreseeable vertical alignment changes. Where air release valves are located on water mains the lines should be a minimum of 6 feet below the existing edge of pavement in this area.

The laying conditions for ductile iron pipe shall be certified by a Professional Engineer licensed in the State of North Carolina and installed in accordance with AWWA C600 and the Ductile Iron Pipe Research Association.

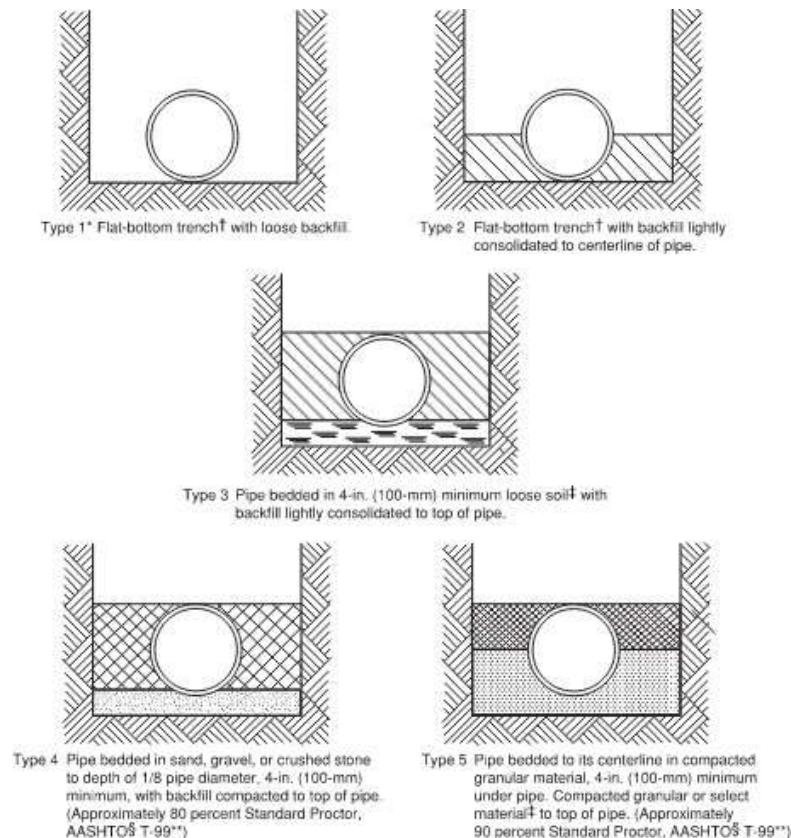


Figure 1: Laying Conditions for Ductile Iron Pipe (AWWA C600)

Locator devices as manufactured by 3M Corporation shall be placed directly on top of distribution water mains along major thoroughfares and cross-country installations (and as otherwise directed by the Executive Director of Utilities and Infrastructure Services) at 100 foot intervals and turns/bends. Locator tape shall also be required to be installed at 2 feet above the pipe.

All construction relating to the utility improvements which will be maintained by the Town must be performed by a contractor licensed in North Carolina. Proof of licensure will be required at the Project Preconstruction Meeting. Operation of existing valves and fire hydrants shall be by Town staff only.

. Town water mains that are 16-inches or greater are considered water transmission mains. Service connections to the Town's water transmission mains are prohibited. A proposed water main connection to the Town's water transmission mains requires an exception granted by the Executive Director of Utilities & Infrastructure. All requests are subject to completing a hydraulic study to confirm adequate pressure can be maintained in the system.

21000.02 FIRE HYDRANTS (Public and Private)

A. Location

All fire hydrants shall be installed on a minimum 6-inch waterline with minimum of 20' width easement including 5 feet beyond fire hydrant. Only 1 fire hydrant may be installed on a dead end 6-inch line. There shall be at least 1 fire hydrant at each street intersection located in accordance with the Standard Detail section of these Standards (TOHS Detail HS613). Each fire hydrant shall have a valve on the hydrant service leg, located within 2 feet of tee on the main line.

No building lot shall be more than 350' from fire hydrant.

In residential areas, the maximum distance between fire hydrants, measured along street centerlines, shall be 500 feet. In residential areas, the minimum fire flow shall be 1000 gpm with a minimum system pressure of 25 psi for 1 hour.

In business, office and institutional, and industrial districts, the maximum distance between hydrants, measured along street centerline, shall be 300 feet. When business, office and institutional, and industrial intersections are not more than 450 feet apart, no hydrant is required between intersections. The minimum fire flow in these areas shall be 1500 gpm with a minimum system pressure of 25 psi for 2 hours.

The minimum number of fire hydrants available to a building shall not be less than that listed in Table A1. The number of fire hydrants available to a complex or subdivision shall not be less than that determined by spacing requirements listed in Table A1 when applied to fire apparatus access roads and perimeter public streets from which fire operations could be conducted.

Existing fire hydrants on public streets are allowed to be considered as available. Existing fire hydrants on adjacent properties shall not be considered available unless fire apparatus access roads extend between properties and easements are established to prevent obstruction of such roads.

The average spacing between fire hydrants shall not exceed that listed in Table A1.

Exception: The Office of the Fire Marshal is authorized to accept a deficiency of up to 10 percent where existing fire hydrants provide all or a portion of the required fire hydrant service.

Regardless of the average spacing, fire hydrants shall be located such that all points on streets and access roads adjacent to a building are within the distances listed in Table A1.

**Table A1
NUMBER AND DISTRIBUTION OF FIRE HYDRANTS**

FIRE-FLOW REQUIREMENTS (gpm)	MINIMUM NUMBER OF HYDRANTS	AVERAGE SPACING BETWEEN HYDRANTS (Feet) ^{a, b, c}	MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO A HYDRANT ^d
1,750 or less	1	300	250
2,000-2,250	2	300	225
2,500	3	300	225
3,000	3	300	225
3,500-4,000	4	300	210
4,500-5,000	5	300	180
5,500	6	300	180
6,000	6	250	150
6,500-7,000	7	250	150
7,500 or more	8 or more ^e	200	120

^{a.} Reduce by 100 feet for dead-end streets or roads.

^{b.} Where streets are provided with median dividers that cannot be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis.

^{c.} Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.

^{d.} Reduce by 50 feet for dead-end streets or roads.

^{e.} One hydrant for each 1,000 gallons per minute or fraction thereof.

When new buildings are constructed, or existing buildings expanded, all points of exterior walls for buildings shall be within 150' of a fire access lane. When a fire access lane is provided then all portions of exterior walls are required to be within 300' of a hydrant. The maximum length of fire access lanes without an approved turn-a-round is 150'. Hydrants shall be located at least 40 feet from the building or as specified by the Town of Holly Springs Fire Department, Office of the Fire Marshal. See Section 6.07E for fire hydrants required for automatic fire sprinkler systems.

Where sprinkler systems or standpipe systems are used, the fire department connections (FDC) shall be located on the street side of the building and within 100 feet of a fire hydrant and at fall zone line or as specified by the Office of the Fire Marshal, and shall be located so that nothing obstructs direct access. Where a sprinkler system or a riser room are required, outside access in accordance with the N.C. Building Code shall be provided. Backflow prevention for sprinkler systems shall be as specified in Section 6.06 of these Standards. Flow data for system design shall be field-verified by the designer. The Town will provide assistance with opening valves and hydrants for the collection of data for system design. FDC's can be mounted on single story buildings only.

A hydraulic report signed, sealed, and dated within 12 months by an Engineer may be required by the Town to document meeting the minimum fire flow and system pressure requirements. On all thoroughfares and collectors with access points only at street intersections, hydrants shall be located at each street intersection and staggered at 1000 foot intervals along the street. Where these intersections are less than 1200 feet apart, no hydrant is required between the intersections.

B. Specifications

Hydrants shall conform to AWWA C502 with a minimum valve opening of 4½ inches. All fire hydrants shall be furnished with a 5 inch Storz/quick connect coupling on the steamer outlet with a chained cap. The Storz connection shall be by the hydrant manufacturer and only come as part of the hydrant assembly. No adapters for the Storz connection are allowed. Hydrants shall also be furnished with: double 2½-inch hose connections with caps and chains, National Standard Threads, mechanical joint, 1½-inch pentagon operating nut, open left, painted Sherwin Williams pro industrial urethane alkyd enamel safety yellow B54 Y157, bronze to bronze seating, a minimum 3½-foot bury depth with break away ground line flange and break away rod coupling. The hydrant bonnet will be designed with a sealed oil or grease reservoir with O-ring seals and a Teflon thrust bearing, as furnished by Mueller "Centurion" (A-421), Kennedy 'Guardian', American Darling (MK-73), Clow or Waterous. Fire hydrant caps shall be attached to the body of the hydrant with a minimum 2/0 twist link, heavy duty, non-kinking, machine chain. All fire hydrants shall be designed for a working pressure of 250 psi or greater.

All hydrants and Fire Access Lanes shall be installed and operational before any combustible material is brought onto the site.

C. Installation

Hydrants shall be set plumb, properly located with the pumper nozzle facing the closest curb. The back of the hydrant opposite the pipe connection shall be firmly blocked against the vertical face of the trench with 1/3 cubic yard of concrete. Double bridle rods and collars shall not be less than 5/8 inch diameter stock and coated with bituminous paint. All fire hydrants shall be newly painted in accordance with NFPA standards. A minimum of 8 cubic feet of stone shall be placed around the hydrant. The backfill around the hydrants shall be thoroughly compacted. Hydrant installation shall be in accordance with the Standard Details section of these Standards. Fire hydrants shall be installed on a clear level space with a minimum of five (5) feet clearance provided and maintained on all sides of a fire hydrant for immediate access. There must be clearance with a minimum of 18"-24" from center of 5" Storz cap to grade and shall be installed with positive drainage.

D. Relocation

For installations where hydrants will be relocated, all hydrants with greater than 20 years operational service, as indicated by the date of manufacture provided on the hydrant, shall be replaced with a new fire hydrant in accordance with Engineering Design and Construction Standards. The fire hydrant being replaced shall be returned to the Town of Holly Springs Public Works Department.

For installations where the hydrant to be relocated has less than 20-years of operational service, the existing hydrant may be relocated. The existing hydrant shall be disinfected, flushed and pressure tested prior to being placed back into service.

E. Fire Flow Requirements for Buildings

1. One- and two-family dwellings

The minimum fire-flow and flow duration requirements for one-and two-family dwellings having a fire-flow calculation area that does not exceed 3,600 square feet (344.5m²) shall be 1,000 gallons per minute at 25psi for 1 hour.

Fire-flow and flow durations for dwellings having a fire-flow calculation area in excess of 3,601 square feet and greater shall not be less than specified in tables E1 and E2 at 25psi.

2. Buildings other than one- and two-family dwellings.

The minimum fire-flow and flow duration for buildings other than one-and two-family dwellings shall be as specified in tables E1 and E3, but no less than 1,500 gallons per minute at 25psi.

3. Water supply for buildings equipped with an automatic sprinkler system.

For building equipped with an approved automatic sprinkler system, the water supply shall be capable of providing the greater of:

1. The automatic sprinkler system demand, including hose stream allowance.
2. The required fire-flow.

Table E1**MINIMUM REQUIRED FIRE-FLOW AND FLOW DURATION FOR BUILDINGS**

(Appendix B of the 2018 NC Fire Prevention Code)

FIRE-FLOW CALCULATION AREA (square feet)					FIRE-FLOW (gallons per minute) ¹	FLOW DURATION (hours)
Type 1A and 1B ²	Type IIA and IIIA ^a	Type IV and V-A ^a	Type IIB and IIIB ^a	Type V-B ^a		
0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1,500	2
22,701-30,200	12,701-17,000	8,201-10,900	5,901-7,900	3,601-4,800	1,750	
30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	4,801-6,200	2,000	
38,701-48,300	21,801-24,200	12,901-17,400	9,801-12,600	6,201-7,700	2,250	
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750	
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3,000	3
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3,250	
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3,500	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3,750	
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4,000	4
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4,250	
164,201-183,400	92,401-103,100	59,101-66,000	42,701-47,700	26,301-29,300	4,500	
183,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4,750	
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5,000	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5,250	
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5,500	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5,750	
295,901-Greater	166,501-Greater	106,501-115,800	77,001-83,700	47,401-51,500	6,000	
—	—	115,801-125,500	83,701-90,600	51,501-55,700	6,250	
—	—	125,501-135,500	90,601-97,900	55,701-60,200	6,500	
—	—	135,501-145,800	97,901-106,800	60,201-64,800	6,750	
—	—	145,801-156,700	106,801-113,200	64,801-69,600	7,000	
—	—	156,701-167,900	113,201-121,300	69,601-74,600	7,250	
—	—	167,901-179,400	121,301-129,600	74,601-79,800	7,500	
—	—	179,401-191,400	129,601-138,300	79,801-85,100	7,750	
—	—	191,401-Greater	138,301-Greater		85,101-Greater	

a. Types of construction are based on the NC Building Code

b. Fire-Flow is measured at 25 psi residual pressure.

TABLE E2

**REQUIRED FIRE-FLOW FOR ONE-AND
TWO-FAMILY DWELLINGS**

FIRE-FLOW CALCULATION AREA (square feet)	AUTOMATIC SPRINKLER SYSTEM (Design Standard)	MINIMUM FIRE- FLOW (gallons per minute)	FLOW DURATION (hours)
0-3,600	No automatic sprinkler system	1,000	1
3,601 and greater	No automatic sprinkler system	Value in Table E1	Duration in Table E1 at the required fire-flow rate
0-3,600	Section 903.3.1.3 of the NC Fire Code Section P2904 of the NC Residential Code	1,000	Duration in Table E1 at the required fire-flow rate
3601 and greater	Section 903.3.1.3 of the NC Fire Code Section P2904 of the NC Residential Code	1/2 value in Table E1 but no less than 1,000	1

Table E3

REQUIRED FIRE -FLOW FOR BUILDINGS OTHER THAN ONE-TWO FAMILY DWELLINGS

Automatic Sprinkler System (Design Standard)	MINIMUM FIRE-FLOW (gallons per minute)	FLOW DURATION (hours)
No automatic sprinkler system	Value in Table E1	Duration in Table E1
Section 903.3.1.1 of the NC Fire Code	25% of the value in Table E1 but no less than 1,500	Duration in Table E1 at the reduced flow rate
Section 903.3.1.2 of the NC Fire Code	25% of the value in Table E1 but no less than 1,500	Duration in Table E1 at the reduced flow rate

21000.03 VALVES AND APPURTENANCES

A. Location

Valves shall be installed on all branches from feeder mains and hydrants according to the following schedule: 4 valves at crosses; 3 valves at tees; and 1 valve on each hydrant branch. When a loop section of waterline is connected back into the feeder main within a distance of 200 feet or less, only 1 valve will be required in the feeder main.

Where no waterline intersections are existing, a main line valve shall be installed at every 100 feet per 1-inch diameter main up to a distance of 2000 feet between valves.

Blowoff assemblies shall be a minimum of 2 inches and installed at the end of all dead-end waterlines. Where there is not sufficient pressure or fire hydrants located to thoroughly flush the system, a larger blowoff may be required. On large diameter mains or other circumstances, larger blowoffs may be required by the Executive Director of Utilities and Infrastructure Services.

Combination air valves shall be installed at high points of waterlines 12 inches in diameter or larger, as directed by the Executive Director of Utilities and Infrastructure Services. All new air release valves shall be installed in precast manholes. Existing lines in which an air release valve is installed can use a dog house manhole. Water lines shall be installed at a grade which will allow the air to migrate to a high point where the air can be released through an air valve. A minimum pipe slope of 1 foot in 500 feet should be maintained. The size of air valve shall be designed by a Professional Engineer registered in North Carolina. Combination air valves or other types of air release valves may be required at other locations as directed by the Executive Director of Utilities and Infrastructure Services.

All new construction air release manholes shall be a precast manhole. Doghouse manholes can only be installed on existing water lines.

Water lines crossing stream beds will be required to be installed with restrained joint pipe inside a steel encasement pipe.

B. Specifications

Gate Valves greater than 2 inches shall meet all requirements of AWWA C500 for a working pressure of 150 psi. All shall be mechanical joint with iron body, resilient wedge seat type in accordance with AWWA C509 with a non-rising stem and open left with a double O-ring seal. Gate valves shall be installed in a vertical position.

Valve Boxes shall be cast iron of the screw or telescopic type with a 5-inch opening with "water" stamped on the cover. Valve box ring adjustments will not be allowed. Locking valve boxes may be required as determined by the Executive

Director of Utilities and Infrastructure Services. All castings shall be made in the United States.

Butterfly Valves shall be installed in waterlines 24 inches or greater. All shall meet the requirements of AWWA C504 with mechanical joints, 2-inch operating nut and open left.

Blowoff Assemblies shall be constructed as shown in the Standard Details Section of these Standards. The valves shall be an AWWA iron body gate valve with a non-rising stem and a 2-inch operating nut.

Pipe Fittings shall be compact fittings in accordance with AWWA C153. Joints for fittings shall be mechanical joint and lined with cement mortar with a seal coat of bituminous material, all in accordance with AWWA C104.

Reaction Blocking for all fittings or components subject to hydrostatic thrust shall be securely anchored by the use of concrete thrust blocks poured in place. The required reaction areas are shown in the Standard Details Section of these Standards. Concrete shall be installed so that it does not interfere with the removal of fittings. Material for reaction blocking shall be 3000 psi concrete. Alternative restraining methods may be considered only in unusual circumstances and must be designed by a Professional Engineer registered in North Carolina and approved by the Executive Director of Utilities and Infrastructure Services.

Tapping Sleeves shall be stainless steel sleeves with stainless steel flanges meeting the material requirement of AWWA C223 and AWWA C228. The sleeves shall be mechanical joint to the main line and flanged to the tapping valve. Mechanical joint outlet connections shall be compatible with ANSI/AWWA C111/A21.11.

Tapping Saddles shall be used on mains 16 inches and larger. Saddles shall be made of stainless steel providing a factor of safety of 2.5 with a working pressure of 250 psi. Saddles shall be equipped with an AWWA C110 flange connection on the branch. Sealing gaskets shall be O-ring type, high quality molded rubber having an approximate 70 durometer hardness, placed into a groove on the curved surface of the saddles. Straps shall be alloy steel.

The maximum size saddle outlet for each size of pipe to be tapped shall be as follows:

Size pipe to be tapped	Maximum size saddle outlet
16"	8"
18"	8"
20"	10"
24" and larger	12"

Combination Air Valves shall be of the single housing style that combines the operation of both an air/vacuum and air release valve. The valve shall be manufactured for a 150 PSIG working pressure and be sized by the Engineer. The valve must meet the requirements of AWWA C512 and be installed in accordance with the Standard Details Section of these Standards.

C. Installation

Valves shall be properly located, operable and at the correct elevation. All valves and reducers shall be rodded to a nearby tee or cross if possible. As shown in the Standard Details Section of these Standards. If reducers cannot be rodded, concrete blocking or other restraining methods will be required. The valve box shall be centered over the wrench nut and seated on compacted backfill without touching the valve assembly. The maximum depth of the valve nut shall be 5 feet, unless approved by the Executive Director of Utilities & Infrastructure Services. When valve extension kits are used, they must be manufactured by the same company which manufactured the valve.

All valve boxes in roadways shall be encased in a trowel-finished 30" diameter circle by 12" thick circular pad of 3000 psi concrete beneath the asphalt course with the cover flush with the top of the pavement.

Valve boxes outside roadways shall be flush with finished grade with a 2'x2'x6" concrete encasement or precast concrete donut.

Precast concrete valve box encasements may be used for valve box encasement outside of paved areas only.

21000.04 WATER SERVICE TAPS

A. Materials

Corporation Stops shall be brass, complete with a flared or compression coupling and AWWA Standard threads as per AWWA C800. Taps shall be located at 10 or 2 o'clock on the circumference of the pipe. Service taps shall be staggered alternating from one side of the water main to the other, and at least 12 inches apart. The taps must be a minimum of 24 inches apart if they are on the same side of the pipe.

The maximum size of direct taps without a fitting, tapping sleeve or saddle for ductile iron water mains shall be as follows:

4" main - 3/4" tap
6" main - 1" tap
8" main - 1 1/4" tap

10" main - 1½" tap
12" main - 2" tap

No burned taps will be allowed and each corporation stop will be wrapped with Teflon tape for ductile iron pipe water mains.

Service Saddles shall be bronze body (85-5-5 waterworks brass) and double strap for taps with silicon bronze nuts conforming to ASTM A98 and factory-installed grade 60 rubber gaskets.

Copper Service Tubing shall be type K soft copper tubing per ASTM B88. The longest available length of service line should be used with no unions. As an example, for a ¾-inch service connection, no union shall be used in the installation of 100 feet or less. Unions shall be made with flare type couplings.

Meter Boxes for ¾-inch Services shall be 18 inch depth cast iron MBX-1 and a complete unit (less meter) for setting a 5/8 by 3/4-inch water meter. Meter box grade adjuster rings are not acceptable.

Meter Boxes for 1-inch Services shall be 18 inch depth cast iron box and cover with a meter yoke and/or copper resetter. Meter box grade adjuster rings are not acceptable.

Meter Boxes for 1½ and 2-inch Services shall be lightweight polymer concrete as indicated in the Standard Details Section of these Standards. Piping for 1½ and 2-inch water meters shall be constructed from brass and copper tubing and shall be equipped with angled check valve outlets and by-pass flanged valve or by-pass flanged ball valve inlets. Meter boxes shall not be allowed in travel lanes or traffic areas. Meter box grade adjuster rings are not acceptable.

Meters for ¾" services shall meet the requirements of AWWA C700 and be supplied and installed by the Town of Holly Springs.

Meters for services 1 inch and greater shall meet the requirements of AWWA C700 and be paid for by the Developer and installed by the Town of Holly Springs Public Works Department after approval by the Executive Director of Utilities and Infrastructure Services. **Meters 2 inches and greater** shall require a 2 inch bypass and shall require a meter test port. A strainer shall be provided upstream of the meter.

Meter Boxes shall not be located in sidewalk or travel lanes, except as noted below.

Meter Vaults within paved areas shall meet HS-20 loading requirements and shall be located outside travel areas. The access door shall be aluminum with a flush drop lift handle, stainless steel hinges and bolts, a stainless steel slam lock, an automatic hold open arm, and compression springs to allow for easy opening.

Positive drainage shall be provided for all meter vaults. Positive drainage shall be construed to mean a “daylight” drain not less than 4” schedule 40 PVC pipe with flap valve on the end. Vault dimensions must be sized to ensure pipe work will fit within the vault. When installing pipe work, ensure it is spaced evenly within the vault.

All vaults over 2” in size shall be in below ground vault unless in riser room.

B. Individual Water Services

Individual water services shall be provided from the main to each water meter for single family residences in accordance with the Standard Details section of these Standards. Multi-family units may be in accordance with the Standard Detail for multi-family units in the Standard Details section of these Standards. All connections shall be made by wet taps.

Service connections shall be made perpendicular from the main line and shall run straight horizontally toward the meter and then vertically to the meter which shall be located at the edge of the right of way or easement of the served property. Refer to the standard detail on water service installations for more information. No water meter box or vault shall be located in streets, sidewalks, or parking areas in residential areas. For non-residential development, individual services are required for each business space. In non-residential areas, meter locations shall be approved on a case-by-case basis. Provisions for backflow prevention shall be as specified in Section 6.06 of these Standards.

All water service connections to existing and new water mains shall be made by a licensed Contractor in the State of North Carolina and in accordance with these Standards.

Water meters shall be sized based on water demand. Water meter size shall be determined from the following table; or as otherwise specified by the Executive Director of Utilities and Infrastructure Services. All non-residential projects shall submit sealed calculations prepared in conformance with the AWWA Manual of Practice for approval of type of meter and meter size by the Town.

WATER METER SIZING

Meter Size (inches)	Flow Range (GPM)	Load Range (number of fixture units)	
		Supply Systems Predominately for Flush Tanks	Supply Systems Predominately for Flush Valves
5/8" PD	0 - 20	1 – 22	1 - 8
1" PD	20 - 50	22 – 140	9 - 50
1½" PD	50 - 100	140 – 450	50 - 275
2" C	100 - 200	450 – 1000	275 - 1000
3" C	200 - 400	1000 – 2500	1000 - 2500
4" C	400 - 600	2500 – 5000	2500 - 5000

PD = Positive Displacement

T = Turbine (may be required on a case-by-case basis)

C = Compound (must be sized on a case-by-case basis)

21000.05 CLEARANCE BETWEEN WATER MAINS, AND NON-POTABLE WATER LINES

Water mains shall be laid at least 10 feet laterally (measured edge to edge) from existing or proposed sanitary sewer unless local conditions or barriers prevent a 10-foot lateral separation--in which case:

- (1) The water main is laid in a separate trench, with the elevation of the bottom of the water main at least 18 inches above the top of the sewer; or
- (2) The water main is laid in the same trench as the sewer with the water main located at one side on a bench of undisturbed earth, and with the elevation of the bottom of the water main at least 18 inches above the top of the sewer.

Water mains shall be laid at least 10 feet laterally (measured edge to edge) or 18-inches above existing or proposed reclaimed water distribution lines, in accordance with the most recent revision to 15A NCAC 18C .0906 (e).

A water main that crosses a sewer/reclaimed line shall be laid a minimum vertical distance of 18 inches from the outside of the water main and the outside of the sewer/reclaimed, either above or below the sewer/reclaimed, with preference to the water main located above the sewer/reclaimed. One full length of water pipe shall be located so that both joints will be as far from the sewer/reclaimed as possible.

When water mains must cross sewer mains, the water mains shall cross at an approximate 90° angle unless adequate vertical separation is provided.

Where it is infeasible to maintain the required 18 inches of vertical separation between a water main and a sanitary sewer main, a Professional Engineer licensed in the state of North Carolina can submit justification of the deviation according to special conditions listed under the most recent revision of 15A NCAC .0906 (c) and .0906 (f).

To allow for construction and repair, a minimum distance of 12 inches shall be maintained between the outside of the water main and the outside of all other utilities. Where it is infeasible to maintain the required 12 inches of vertical separation between a water main and other utilities, a Professional Engineer licensed in the state of North Carolina must seek to defend a special consideration per 15A NCAC .0904(c).

Water lines that cross and run beneath storm drainage pipes that are greater than or equal to 42" diameter (single pipe) or 36" diameter (multiple pipes) and/or streams or creeks shall be installed as restrained joint pipe and enclosed in casing pipe. A minimum cover of 5 feet shall be provided over the pipe for underwater stream crossings, in accordance with the Recommended Standards for Water Works (Ten State Standards) and the Rules Governing Public Water Systems. Installation may be by bore and jack or excavation at discretion of Executive Director of Utilities and Infrastructure Services.

For required separation and clearance from water main to reclaimed water reference Section 11.00.

21000.06 BACKFLOW PREVENTION AND CROSS CONNECTION

A. General

Cross-Connection shall mean any unprotected actual or potential connection or structural arrangement between a public or a consumer's water system and any other source or system through which it is possible to introduce any contamination or pollution, other than the intended potable water with which the system is supplied. All construction shall be required to comply with the Town of Holly Springs Ordinance for the Control of Backflow and Cross-Connection No. 03-09 in its entirety, in addition to the following:

All residential water services for domestic purposes shall be provided with a dual check backflow prevention device on the meter setter within the meter box. Dual check valves must comply with AWWA Standard C-510.

All irrigation services and non-residential services shall be provided with reduced pressure principle backflow prevention installed in accordance with the State of North Carolina and the Foundation for Cross Connection Control and Hydraulic Research at the University of South Carolina (USC) and AWWA Standard C-511.

This includes all service connections to fire sprinkler systems. Reduced pressure zone (RPZ) backflow preventers shall be installed aboveground immediately behind the meter (on the private side). Alternate installations shall comply with Town Ordinance 03-09 as noted above, and require approval of the Executive Director of Utilities and Infrastructure Services. Above-ground installations that service any use other than single family residential users will require an insulated box mounted on a 4" concrete slab, wired for a heater and provided with a heater. A 4" concrete slab shall be provided for underground RPZ's and for insulated boxes.

21000.07 AUTOMATIC FIRE SPRINKLER SYSTEMS

A. General

Working drawings and calculations for all fire sprinkler systems and standpipe systems, prepared by a Professional Engineer registered in North Carolina, shall be submitted to the Town of Holly Springs Inspection Department for approval before installation begins.

B. Design

Approved working plans shall be in complete compliance with NFPA No. 13, 13D, 13R, 14, 231, 231C, 231F and Town specifications. A NFPA above ground material and test certificate, and a NFPA underground material and test certificate are required after completion of designated and approved work. Design shall include backflow prevention measures, details on any proposed fire pumps and/or tanks, calculations to ensure that the allowable pressures in the Town system are maintained. Flow data for system design shall be field-verified by the designer. The Town will provide assistance with opening valves and hydrants for the collection of data. Fire lanes are required in front of all FDC, Riser Rooms, Fire Hydrants, PIV, and other entrances and exits as determined by the Town or Office of the Fire Marshal.

C. Post Indicator Valve (PIV)

A post indicator valve (PIV) shall be provided on the Town's side at the right of way or edge of easement. The valve shall be locked in open position monitored by an electronic tamper switch. When backflow prevention devices are contained within a building, an outside access (above the finish floor elevation) shall be provided. The top of the post indicator valve shall be installed at 30-42 inches from the finished grade, minimum of 5' of unobstructed access perimeter shall be maintained around the PIV and must be protected from vehicular obstruction. The Town shall maintain up to, but not including, the post indicator valve. The post indicator valve shall be painted red and must be protected from vehicular obstruction with means of steel bollards when not located behind curb. In urban settings, a wall mounted indicator valve may be used where there is no suitable

location for a post mounted indicator valve. Wall mounted indicator valves shall be centered 30-42 inches above the finished grade. It shall be greater than 10 feet from any door, window or protected opening along the wall.

Post indicator valve is to be located as close as possible to the tap of the water main.

D. Backflow Prevention

When a fire protection system is proposed an RPZ type backflow prevention device as approved by USC (with make and model specified) shall be required. RPZ's shall be located inside a riser room in a location shown on the construction plans. Existing structures shall be exempt from this section until such time any structure is sold, remodeled or improvements to the property exceeding the sum of \$2,500.00 are made, or a new occupancy permit is otherwise required for the property.

E. Fire Department Connection (FDC)

Where automatic fire sprinkler systems or standpipe systems are used, a Fire Department Connection (FDC) with check valve [reference detail section 6, HS625] shall be red in color, provided on the street side of buildings, fully visible and recognizable from the street or nearest point of fire department vehicle access or as otherwise approved by the Office of the Fire Marshal. The Fire Department Connection shall be located 36 inches above proposed grade and within 100 feet of a fire hydrant and at fall zone line or as specified by the Office of the Fire Marshall, and shall be located so that nothing obstructs direct access. A 5 foot clearance shall be provided around the FDC connection and labeled with 6 inch contrasting colored letters. When a sprinkler system serves only part of a large structure, the fire department connection shall be labeled as to which section of the structure that sprinkler riser serves. This labeling shall be a minimum of 2 inch lettering on a permanent sign. FDC shall have a 5" Storz connection with chained cap. FDC's can be mounted on single story buildings only.

F. Dedicated Riser Room

A dedicated sprinkler riser room providing an entry door to the room from the exterior of the building in accordance with NC Building Code shall be provided. All dedicated riser rooms shall be equipped with a floor drain sized appropriately to prevent flooding. The floor drain shall be piped to storm system or main building drain. The floor drain shall be provided with a circular raised ring/hub around the floor drain to prevent debris and/or chemicals from entering the drain during an emergency spill. The hub shall be fabricated of cast iron or other corrosion resistant material and extend at least 3 inches above floor elevation. The exterior riser room door plus all other required or Town designated fire exits shall have a protected clearance of 5 feet from any obstruction by vehicular movement by means of curbing, bollards, or concrete bumpers.

G. Access

Any building, other than a residential building with less than four units, shall have installed a “Knox Box”, a key box entry system per North Carolina Fire Code, to be used by the local fire department in case of emergency. The key box shall contain master keys necessary for access to all portions of the premises. The Office of the Fire Marshal may specify such supplemental information as floor plans, lists of chemicals and hazardous materials located within the building to be required within the Knox Box.

This Knox Box shall be mounted on the exterior entrance to the dedicated riser room or at the normal fire department entrance when there is no dedicated riser room. Mount Knox Box on wall at 5 feet A.F.F. on door handle side of dedicated riser room door or normal fire department entrance door. This Knox Box shall be ordered online at www.knoxbox.com and shall be in place before a Certificate of Occupancy is issued. Keys to access the facility shall be provided to the Town Fire Department by the owner/manager.

Existing structures shall be exempt from this section until such time as any such structure is sold, remodeled or improvements to the property, exceeding the sum of \$2,500.00, are made, or a new occupancy permit is otherwise required for the property.

H. Identification

The exterior door leading to the dedicated sprinkler riser room shall be labeled with minimum 4 inch lettering designating “SPRINKLER RISER ROOM” in a contrasting color. Durable vinyl lettering is suggested.

I. Installation

All gas or electrical panels must be protected with steel bollards from vehicular traffic.

J. Fire Alarm Panel Location

When a building is protected by an automatic sprinkler system and has a fire alarm system, the fire alarm control panel or a remote annunciation of the fire alarm control panel shall be placed in the sprinkler riser room. This control panel shall have the capacity of silencing and resetting. Adjacent to the fire alarm control panel shall be a mounted framed zone map, removable from the wall. Nomenclature shall correspond with the zone map.

When there is no sprinkler system in building, the fire alarm control panel or remote annunciator shall be located at the normal fire department entrance.

21000.08 FIRE DEPARTMENT ACCESS

A. Fire Access and Fire Lanes

Fire Access

The following guidelines represent the Town's efforts to maintain consistency concerning Fire Department emergency access. It is the Town's responsibility to ensure adequate access for the Fire Department and other responding agencies. The Town therefore reserves the right to require modifications to established requirements if, in the Town's opinion, the access cannot be provided or may be compromised.

All access roadways shall be built to street standards as described in the Town's Engineering Design and Construction Standards. The roadway design shall be prepared and certified by a Design Professional. All required access roadways shall be properly maintained and kept clear for emergency use at all times. Any alternatives to these specifications shall be reviewed and approved by the Office of the Fire Marshal prior to construction.

FIRE APPARATUS ACCESS ROAD – A road that provides fire apparatus access from a fire station to a facility, building or portion thereof. This is a general term inclusive of all other terms such as fire lane, Public Street, Private Street, parking lot lane, alley ways and access roadway.

FIRE LANE – A road or other passageway developed to allow the passage of fire apparatus. A fire lane is not necessarily intended for vehicular traffic other than fire apparatus.

Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of the NC Fire Code and Town Standards and shall extend to within 150 feet of all portions of the facility or all portions of the exterior wall of the first story of the building as measured by an approved route around the exterior of the building or facility. The fire official is authorized to increase the 150 feet where:

The building is equipped throughout with an approved automatic sprinkler system installed in accordance with the NC Fire Code and applicable NFPA standards.

Fire apparatus access roads cannot be installed due to location on property, topography, waterways, non-negotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.

There are not more than two Group R-3 or Group U occupancies.

Fire department apparatus access to buildings used for high-piled combustible storage shall comply with the applicable provisions of the NC Fire Code.

Fire apparatus access roads shall have an unobstructed width of not less than 20 feet and an unobstructed vertical clearance of not less than 13 feet 6 inches.

The Office of the Fire Marshal shall have the authority to require an increase in the minimum access widths where they are inadequate for fire or rescue operations.

Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.

Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) in length shall be provided with an approved area for turning around fire apparatus. Proposed turn around area shall not be located within proposed residential lots. See TOHS Detail HS367

Grass pavers are also an acceptable alternative to concrete, asphalt or gravel for the 120' Hammerhead or the acceptable alternative to the 120' Hammerhead. Specification and data sheets on the proposed pavers will need to be submitted to the Fire Department for approval

Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO Standard Specification for Highway Bridges. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, approved barriers, approved signs or both shall be installed and maintained when required by the code official.

The grade of the fire apparatus access road shall be within the limits established by the Office of the Fire Marshal based on the fire department's apparatus.

B. Gates

Gates securing the fire apparatus access roads shall comply with all of the following criteria:

The minimum unobstructed gate width shall be 20 feet.

The gate shall have a Knox Box mounted to it, with keys or access cards to open the gate in the event of an emergency.

Gates shall be of the swinging or sliding type, unless approved by the Office of the Fire Marshal.

Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.

Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by Office of the Fire Marshal.

Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools; locking device specifications shall be submitted for approval by the Office of The Fire Marshal.

The Office of the Fire Marshal is authorized to require the installation and maintenance of gates or other approved barricades across fire apparatus access roads, trails or other access ways, not including public streets, alleys or highways. When required, gates and barricades shall be secured in an approved manner. Roads, trails and other access ways that have been closed or obstructed shall not be trespassed on or used unless authorized by the owner and the Office of the Fire Marshal.

The installation of security gates across a fire apparatus access road shall be approved by the Office of the Fire Marshal. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

C. Two Points of Access

The Office of the Fire Marshal may require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

When two points of access are required, they shall be placed a distance apart of at least one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses. The Town shall not allow the second access point to be limited to use by emergency responders only. The second access shall always be available for public use in case the other access is blocked.

Buildings or facilities located in Commercial and Industrial Developments and exceeding 30 feet or 3 stories in height shall have at least 2 means of fire apparatus access. Buildings or facilities having a gross building area of more than 62,000 square feet shall have at least 2 means of fire apparatus access. If the buildings or facilities are provided with an approved automatic fire sprinkler system, the gross building area can be increased to 124,000 square feet with one access road.

Fire apparatus access roadways shall have a minimum unobstructed width of 26 feet in the immediate vicinity of any building or portion of building more than 30 feet in height. At least one of the required access routes meeting this condition shall be located within a minimum of 15 feet and a maximum of 30 feet from the building, and shall be positioned parallel to one entire side of the building.

Maintenance of the required access shall be considered during the planning stages and installation of Fire Department access roadways, fire hydrants, or connections. This includes the potential growth of trees and/or other vegetation over the years.

D. Fire Lanes

A plan shall be submitted for approval to the Office of the Fire Marshal which indicates all fire lanes and proposed fire lane sign placements for the project site.

The general requirement designates that any building located more than 150 feet from a public road, or which exceeds 30 feet in height and is set back more than 50 feet from a public road, shall have a fire lane.

Fire lanes shall be a minimum width of 20 feet and shall be properly marked and signed to designate the access as a “fire lane” as specified by the Office of the Fire Marshal. For specifications of the fire lane cross section, refer to Section 3 of these standards.

All fire lanes shall be marked in accordance with one of the following requirements:
Continuously painted yellow striping along the fire lane with “No Parking - Fire Lane” printed with minimum 8-inch high letters at 40-foot intervals or as directed by the Office of the Fire Marshal;

Continuously painted yellow curb along the fire lane with “No Parking - Fire Lane” printed with minimum 8-inch high letters at 40-foot intervals or as directed by the Office of the Fire Marshal;

The installation of the MUTCD standard sign showing “No Parking - Fire Lane” placed at each end of the fire lane and at 50-foot intervals with arrows on the signs or a continuously painted yellow strip along both sides of the fire lane (or an additional sign beneath the fire lane sign lettered as “both sides”). Signs shall be a type R8-31 or equivalent reflective sign no less than 12 inches x 18 inches in size, white background, with the wording “No Parking - Fire Lane” in red letters.

Signs shall be posted at the following minimum height:

60 inches to the top of the sign when pedestrians do not pass by or under the sign.
This application includes signs mounted on the building face, a column, or other fixed mounting surface;

84 inches to the top of the sign when the pedestrian path does pass by or beneath the sign. This application includes signs mounted on a fixed metal post located in a sidewalk and/or traffic island.

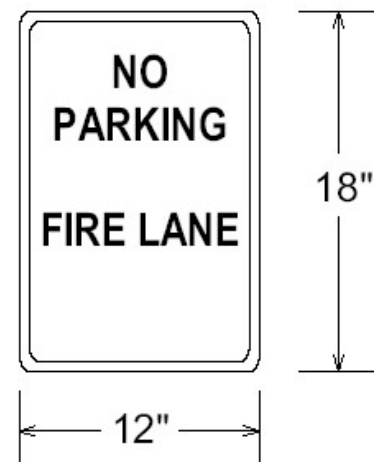
SIGN TYPE "A"



SIGN TYPE "C"



SIGN TYPE "D"



The above fire lane requirements shall also apply to all fire hydrant islands located along the face and sides of a hydrant.

Fire Lanes shall be installed and inspected in accordance with these Standard Specifications as well as the NC Fire Code. The Office of the Fire Marshal shall have the authority to designate fire lanes as deemed necessary for Fire Department access.

Roadways, driveways, and access ways shall not be marked as fire lanes without first obtaining approval from the Office of the Fire Marshal.

E. Fire Safety During Construction

There shall be no open burning within the Town's jurisdiction, unless approved by the Office of the Fire Marshal.

Fire Safety during construction, alteration, or demolition shall be maintained according to the NC Fire Code and other applicable provisions of NFPA 241.

Fire safety during construction and demolition is essential to maintain a safe and efficient project. The use of temporary heating equipment, flammable and combustible liquids storage, use and dispensing, explosives storage, handling and use, and all other general fire safety requirements shall be adhered to according to the NC Fire Code.

Vehicle access for firefighting shall be provided to all construction or demolition sites. Vehicle access shall be provided within 100 feet of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions.

The fire protection water supply system, including fire hydrants, shall be installed and be in at least the functional status prior to placing combustible materials on the project site. If phased construction is planned, coordinated installation of the fire protection water system is permitted.

Any existing fire hydrant removed from service due to construction/demolition activities shall be placed back into service by the Owner/Developer within 14 calendar days from the date it was taken out of service or a timeframe approved by the Office of the Fire Marshal.

The Fire Department shall be notified at least 24 hours before fire hydrant(s) or water line impairment.

21000.09 TESTING AND INSPECTION

Under no circumstance shall any waterline system valve be operated without prior approval by the Development Inspector. Damage to Town infrastructure resulting from illegal operation of valves shall be the responsibility of the Contractor. In addition, the Contractor shall be subject to a fine for operating a valve without prior approval.

All materials shall be inspected by the Development Inspector before they shall be allowed to be installed. Materials rejected by the Development Inspector shall be immediately removed from the job site.

The Contractor shall furnish all materials, labor, equipment, and shall pay for the water used to perform all testing and inspections to the satisfaction of the Development Inspector. The Contractor shall obtain a Water Blowoff Permit from the Town Engineering Department for use when blowing off water mains.

Water service taps shall not be made until after all water main testing is completed, and bacteriological testing is satisfactory.

A. Hydrostatic Testing

Hydrostatic testing shall be done in accordance with AWWA C600. No valve in the existing Town of Holly Springs water system shall be operated without authorization from the Construction Inspector via a Water Blowoff Permit. Each section of line which is to be hydrostatically tested shall be slowly filled with water at a rate which will allow complete evacuation of air from the line. Once the line is full, it shall be blown off at a minimum of 2.5 FPS to flush and remove any debris. The line must be pretested at 200 psi provided that 200 psi is no less than 1.25 times the stated working pressure of the pipeline measured at the highest elevation along the test section and no less than 1.5 times the stated working pressure of the pipeline measured at the lowest elevation along the test section for 2 hours prior to contacting inspector for testing. Hand pumps shall not be used for the pressure testing of water mains. Taps used for testing purposes shall be removed after testing in accordance with Section 6.11 of these Standards.

Each water line shall be tested to a pressure of 200 psi as measured at the lowest elevation of the line, provided that 200 psi is no less than 1.25 times the stated working pressure of the pipeline measured at the highest elevation along the test section and no less than 1.5 times the stated working pressure of the pipeline measured at the lowest elevation along the test section for a duration of 2 hours. The test pressure shall not exceed the thrust restraint design pressures or 1.5 times the pressure rating of the pipe or joint, whichever is less (as specified by the manufacturer). The pressure gauge used in the hydrostatic test shall be calibrated in increments of 10 psi or less. At the end of the test period, the leakage shall be measured with an accurate water meter. Note that all visible leaks are to be repaired regardless of the amount of leakage. The Development Inspector may require pressure tests to be performed in smaller segments to determine if there is a problem

with a particular section of waterline. No chlorine dosage will be allowed in line during testing.

Fire line need to be tested all the way up to the slab through the riser room by the Development Inspector.

ALLOWABLE LEAKAGE	
Pipe Size (inches)	Amount of Allowable Leakage (gallons per 1000 feet of pipe)
4	0.85
6	1.28
8	1.70
12	2.56
16	3.40
20	4.24
24	5.10

B. Chlorination

All additions or replacements to the water system shall be chlorinated before being placed in service. Such chlorination must take place under the supervision of the Construction Inspector.

Chlorination of a completed line shall be carried out in the following manner:

- 1) The specific procedure and order of testing shall follow ANSI/AWWA C651 and be approved by the Construction Inspector before beginning the chlorination process.
- 2) Taps shall be made at the control valve at the upstream end of the line and at all extremities of the line including valves.
- 3) Before the main is chlorinated, it shall be filled with potable water to eliminate air pockets and flushed to remove particulates. Flushing velocity in the main shall no be less than 3 feet per second.
- 3) Drinking water treatment chemicals and drinking water system components shall be ANSI/NSF Standard 60 and 61 compliant. In accordance with ANSI/AWWA C651 4.1.3., a solution of water containing calcium hypochlorite (HTH, 65% available chlorine by weight) shall be introduced into the line by regulated pumping at the control-valve tap. Using ANSI/AWWA C651 4.4

Continuous Feed Method of Chlorination, the solution shall be of such a concentration that the line shall have a uniform concentration of 50 ppm total chlorine immediately after chlorination.

- 4) The HTH solution shall be circulated in the main by opening the control valve and systematically manipulating hydrants and taps at the line extremities. The HTH solution must be pumped in at a constant rate for each discharge rate in order that a uniform concentration will be produced in mains. *Note that for projects that are surrounded by populated development areas, the Construction Inspector can require that the circulation of HTH solution be accompanied with mechanical pumping.*
- 5) HTH solution shall remain in lines for no less than 24 hours or as directed by the Executive Director of Utilities and Infrastructure Services.
- 6) Extreme care shall be exercised at all times to prevent the HTH solution from entering existing mains.

C. Bacteriological Sampling

All new water systems shall be valved off from the existing water system until a satisfactory bacteriological sample is obtained and the Construction Inspector has authorized the use of the new water system.

1. Free residual chlorine after 24 hours shall be at least 10 ppm or the Construction Inspector shall require that the lines be rechlorinated.
2. Flushing of lines may proceed after 24 hours, provided the free residual chlorine analysis is satisfactory. Flushing shall be continued until a chlorine test kit shows that the lines contain only the normal chlorine residual.
3. Samples for bacteriological analysis shall be collected by the Construction Inspector a minimum of 16 hours after flushing is completed. The Contractor shall furnish such help as may be required to secure the required samples. Samples shall be collected and delivered to the Utley Creek Water Reclamation Facility Laboratory or other state-approved, certified laboratory by the Construction Inspector.
4. If bacteriological test results are unsatisfactory, the Contractor shall immediately obtain another Water Blowoff Permit, rechlorinate and retest the lines, proceeding with such measures as are necessary to secure properly disinfected lines.

21000.10 FIRE PROTECTION DURING CONSTRUCTION

The fire protection water supply system, including fire hydrants, shall be installed and tested prior to placing combustible materials on the project site.

21000.11 IRRIGATION SYSTEMS

No mainlines or valves shall be allowed within the utility strip (between the sidewalk and curb). Lateral will be allowed and shall be placed within 1 ft of sidewalk. Pipe material for all lines within the public right of way shall be a minimum of 2 feet deep and Schedule 40 PVC or greater for all lateral irrigation lines.

Irrigation systems shall have a backflow preventer installed in accordance with Section 6.06 of these Standards. All irrigation systems are required to secure a plumbing permit from the Code Enforcement Department prior to installation and shall be inspected after installation. A separate meter is required for irrigation systems.

All irrigation line street crossings shall be contained within a ductile iron or steel encasement pipe. The Town may, in some instances, permit irrigation systems installed in the medians of Town-maintained roadways. These systems must also have french drains installed behind the curb and gutter and piped to a storm drainage collection system. These systems shall be allowed only when some permanent mechanism is established for the private perpetual maintenance of the system(s).

Wells may be kept maintained for irrigation purposes after public utility connection, if they are on the opposite side of the single-family dwelling where the public water and/or sewer service is located.

21000.12 REPAIR OF WATER LINES

Joint Leaks of cast iron pipe, ductile iron pipe, and PVC pipe shall use a bell joint leak repair clamp as manufactured by Rockwell, or other approved equal.

Line Breaks or Punctures shall be repaired by a full circle repair clamp as manufactured by Rockwell, Mueller, or other approved equal.

Line Splits or Blow Outs shall be repaired by replacing the damaged section with ductile iron pipe with a cast iron coupling at each end. The following cast pipe couplings shall be used for each pipe material indicated:

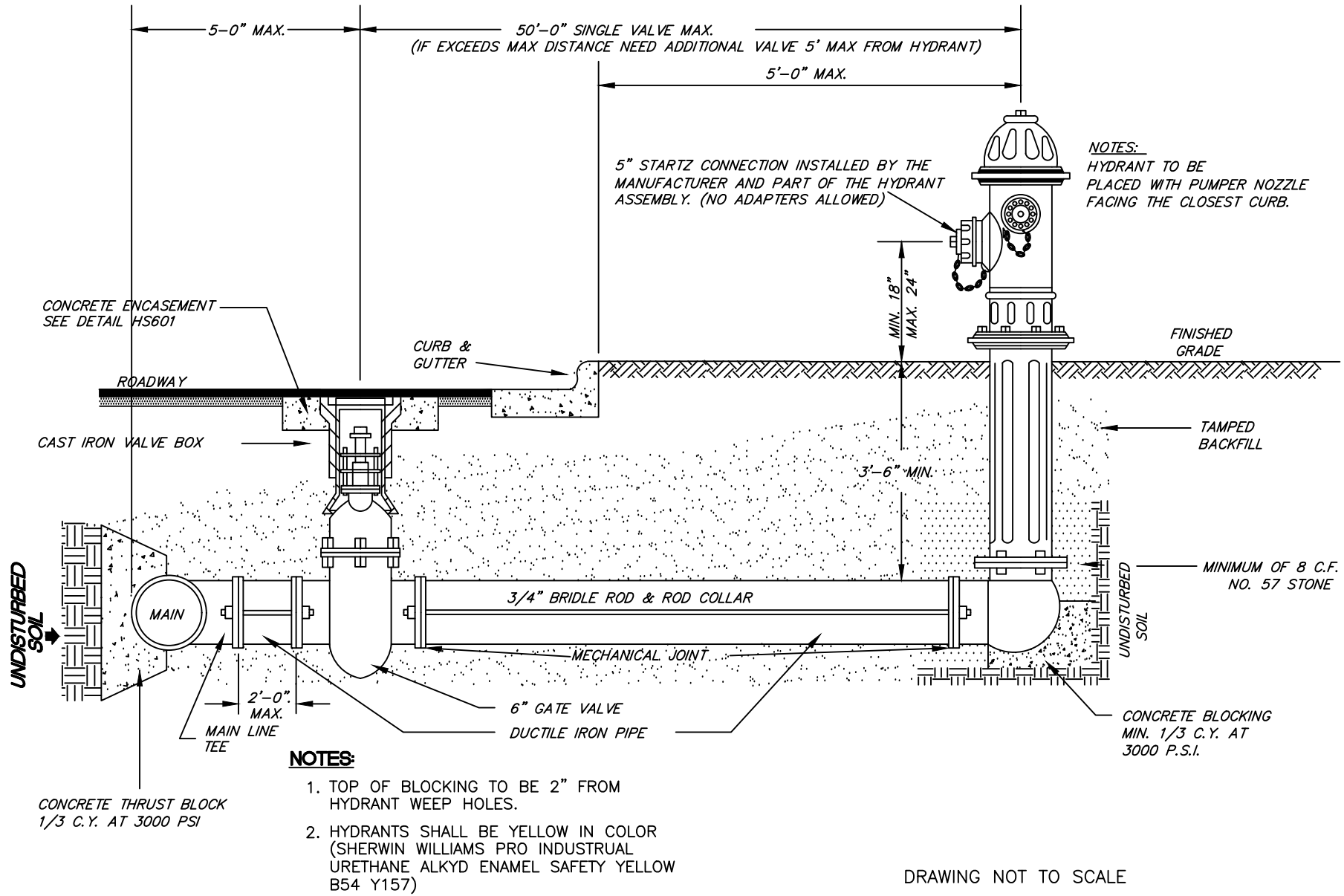
A.C. Pipe - Rockwell 441 cast coupling or other approved equal
Ductile Iron Pipe - Rockwell 431 cast coupling or other approved equal
PVC Pipe - Rockwell 411 cast coupling or other approved equal

For A.C. Pipe to PVC or Ductile Iron Pipe connections, use a cast pipe coupling with different end diameters sized specifically for the pipe materials, and pipe outside diameter at each end.

Water Service Line Repairs

- A water service line severed between the water main and the water meter shall be repaired using new type K copper tubing and bronze or brass 3-piece flare unions.
- A corporation stop pulled out of a PVC pipe water main shall have a new service saddle and a new corporation stop installed on the water main.
- A corporation stop pulled out of a ductile iron pipe water main shall have a full circle repair clamp placed over the old tap hole. A new tap shall be made and a new corporation stop installed on the water main.

END OF SECTION 21000



DRAWING NOT TO SCALE

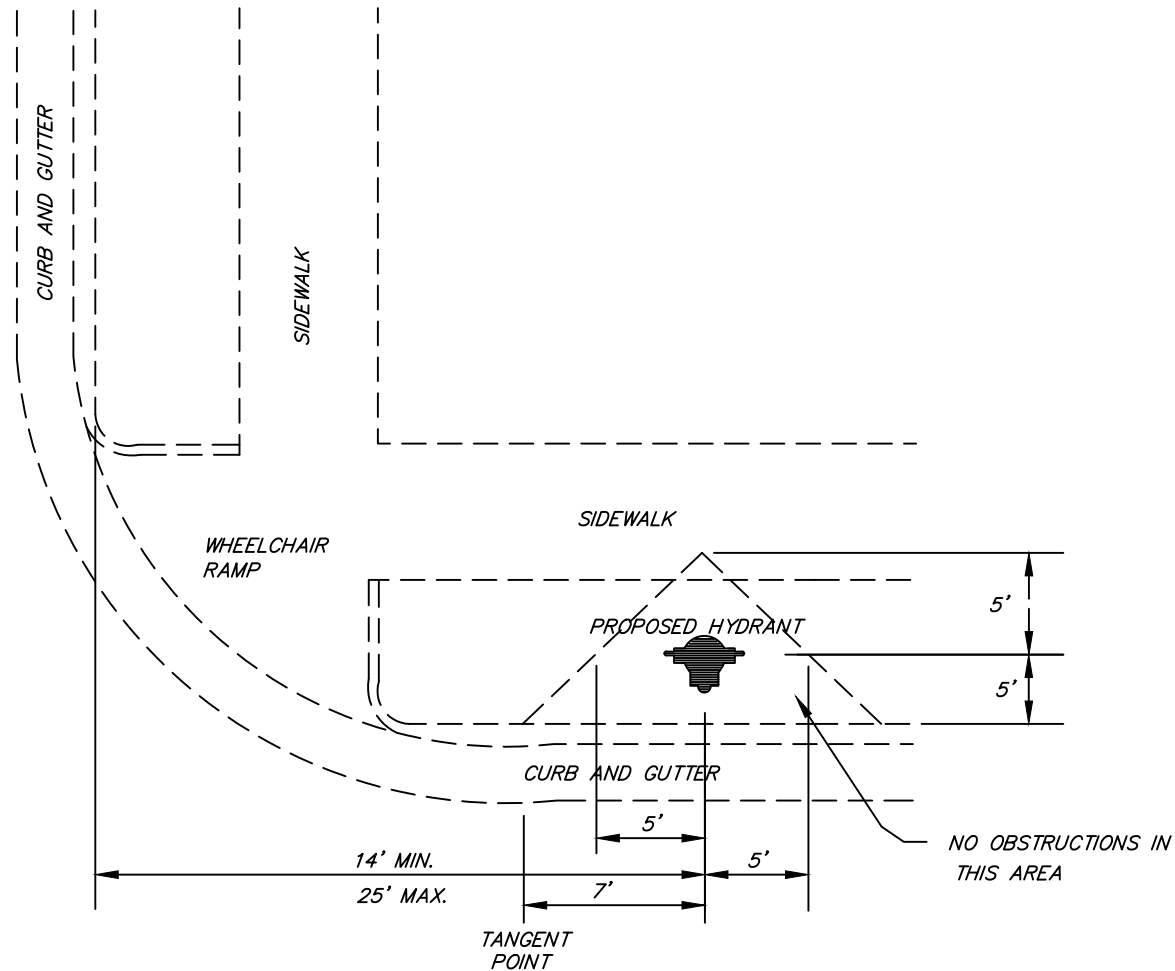
STANDARD HYDRANT INSTALLATION

TOWN OF HOLLY SPRINGS

STANDARD DETAIL NUMBER: HS622

DATE REVISIONS 1 of 2

4/10/26
11/9/21

**NOTES:**

1. LOCATION SHOULD BE COORDINATED WITH NCDOT ALONG STATE MAINTAINED ROADWAYS.
2. HYDRANTS NOT TO BE LOCATED IN RADIUS.

DRAWING NOT TO SCALE

STANDARD HYDRANT LOCATION

TOWN OF HOLLY SPRINGS ENGINEERING DEPARTMENT

STANDARD DETAIL NUMBER: **HS613**

DATE

11/9/21

REVISIONS



NCDOT STANDARD NOTES

- A. NCDOT Standard Specifications – The 2024 North Carolina Department of Transportation Standard Specifications for Roads and Structures, herein referred to as the ‘Standard Specifications’, and the 2024 Roadway Standard Drawings, shall apply to all portions of this project except as may be modified by this document.
- B. Bidder Prequalification - Bidders are required to be prequalified with NCDOT for their specific discipline. Contractors wishing to become prequalified may obtain information through the NCDOT website at:
<https://connect.ncdot.gov/business/Pages/default.aspx>
- C. Award of Contract - The contract will be awarded to the lowest responsible, responsive bidder. Alternate items will not be considered in determining the low bidder and will only be evaluated after the award of the contract is made.
- D. All bidders shall comply with all applicable laws regulating the practice of general contracting as contained in Chapter 87 of the General Statutes of North Carolina which requires the bidder to be licensed by N.C. Licensing Board for Contractors when bidding on any non-federal aid project where the bid is \$30,000 or more, except for certain specialty work as determined by the licensing board, bidders are required to become licensed by the N.C. licensing board. Bidders shall also comply with all other applicable laws regulating the practices of electrical, plumbing, heating and air conditioning and refrigeration contracting as contained in Chapter 87 of the General Statutes of North Carolina.
- E. Liability Insurance – In addition to any insurance requirements as may be required by the LGA, the Contractor is obligated to comply with Article 107-15 of the *Standard Specifications* including the dollar limits set forth.
- F. Build America, Buy America (BABA) – This project shall be governed by the BABA requirements, for the use of domestic steel and iron products, as outlined in the *Standard Specifications*.
- G. Proprietary Items - When a proprietary (brand name) product, whether material, equipment or procedure, are specified in the plans or specifications, they are used only to denote the style, type, character, and quality desired of the product. They do not restrict the bidder from proposing other brands, makes, or manufacturers, which are determined to be of equal quality. The approval, or disapproval of those products, will be made by the Engineer prior to allowing those product(s) or material(s) to be incorporated into the work.
- H. Retainage by LGAs – The LGA for this contract will not retain any amount or percentage from progress payments or final estimates due the contractor.
Retainage by Contractors – Contractors are NOT permitted to retain any amount or percentage from monies due their subcontractors or material suppliers on federally

funded projects except as permitted by Subarticle 109-4(B) of the *Standard Specifications*.

- I. *Traffic Control* –The requirements of the *Manual on Uniform Traffic Control Devices (MUTCD)* – FHWA, as amended by the *NCDOT Supplement to MUTCD*, shall apply. Traffic Control, both vehicular and pedestrian, shall be maintained throughout the project as required by these specifications as modified by the project plans or special provisions.

ALLOWABLE CHANGES TO THE NCDOT 2024 STANDARD SPECIFICATIONS:

1. *Article 102-1 Invitation to Bid, page 1-9*, delete this section in its entirety.
2. *Subarticle 102-8(B) Electronic Bids, page 1-16*, delete this section in its entirety.
3. *Subarticle 102-9(C)2 Electronic Bids, page 1-17*, delete this section in its entirety.
4. *Article 102-10 Bid Bond or Bid Deposit, page 1-18*, line 10, “60” days shall be modified to “ **90** ” days.
5. *Subarticle 102-10 Bid Bond or Bid Deposit, page 1-18*, delete lines 36-43.
6. *Subarticle 102-11 Delivery of Bids, page 1-18*, delete lines 47-48.
7. *Subarticle 102-12(A) Paper Bid, page 1-19*, line 5, the reference to “Contract Officer” shall be changed to “ **Town Attorney** ”.
8. *Subarticle 102-12(B) Electronic Bid, page 1-19*, delete this section in its entirety.
9. *Subarticle 102-13(B)2 Electronic Bids, page 1-19*, delete this section in its entirety.
10. *Subarticle 103-2(B) Electronic Bids, page 1-22*, delete this section in its entirety.
11. *Subarticle 103-3(A) Criteria for Withdrawal of Bid, page 1-23*, modify the reference “G.S.136-28.1” to “G.S.143-129.1”. On page 1-24, in that same subarticle under (5), line 4, modify “State Contract Officer” to “ **Town Attorney** ”.
12. *Article 103-7 Contract Bonds, page 1-25*, line 38, modify “14” calendar days to “10” calendar days per G.S.143-129.
13. *Article 103-9, Failure to Furnish Contract Bonds, page 1-30*, line 15, modify “14” calendar days to “10” calendar days per G.S.143-129.
14. *Article 105-9 Construction Stakes, Lines and Grades, pages 1-43 to 1-44*, delete this section in its entirety and substitute the following: “The Municipality will not set the stakes, lines or grades for this project.”
15. *Article 108-2, Progress Schedule, page 1-63*, add the following requirement as subarticle (D) on page 1-64: “The municipality may add additional requirements as noted in the bid proposal”.
16. *Article 108-3, Preconstruction Conference, page 1-64, line 20*, change “Engineer” to “ **Town Project Manager** ”.
17. *Article 108-4, Construction Conferences, page 1-64, line 28*, change “Engineer” to “ **Town Project Manager** ”.
18. *Article 109-8, Fuel Price Adjustments, page 1-82*, delete this article in its entirety and substitute the following: “Fuel Price Adjustments will not apply to this project.”
19. *Article-620-4, Measurement and Payment, page 6-33*, delete lines 11 through line 35 on and substitute the following: “Asphalt Price Adjustments will not apply to this project.”

PROJECT SPECIAL PROVISIONS

GENERAL

BUILD AMERICA, BUY AMERICA (BABA):

(11-15-22)(Rev. 1-16-24)

106

SP1 G04

Revise the *Standard Specifications* as follows:

Page 1-48, Article 106-1 GENERAL REQUIREMENTS, add the following after line 49:

(C) Build America, Buy America (BABA)

All manufactured products and construction materials permanently incorporated into any project must meet requirements of the Build America, Buy America (BABA) Act of the Infrastructure Investment and Jobs Act (IIJA). Before any material or product shown on the Department's Build America, Buy America (BABA) List is included for payment on a monthly estimate, the Contractor shall furnish the Engineer with a notarized certification certifying that the items conform to the BABA Act. The Department's Build America Buy America (BABA) List can be found on the Department's website.

<https://connect.ncdot.gov/letting/LetCentral/NCDOT%20BABA%20Materials%20List.pdf>

Each purchase order issued by the Contractor or a subcontractor for items on the BABA List to be permanently incorporated into any project shall contain in bold print a statement advising the supplier that the manufactured products and construction materials must be produced in the United States of America. The Contractor and all affected subcontractors shall maintain a separate file for BABA List items so that verification of the Contractor's efforts to purchase items produced in the United States can readily be verified by an authorized representative of the Department or the Federal Highway Administration (FHWA).

CONTRACT TIME AND LIQUIDATED DAMAGES:

(7-1-95) (Rev. 12-18-07)

108

SP1 G10 A

The date of availability for this contract is **upon written notice to proceed**.

The completion date for this contract is **180 calendar days from the contract date**.

Except where otherwise provided by the contract, observation periods required by the contract will not be a part of the work to be completed by the completion date and/or intermediate contract times stated in the contract. The acceptable completion of the observation periods that extend beyond the final completion date shall be a part of the work covered by the performance and payment bonds.

The liquidated damages for this contract are **Six Hundred Dollars (\$1000)** per calendar day.

INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES:

(2-20-07)

108

SP1 G14 A

The Contractor shall complete the required work of installing, maintaining, and removing the traffic control devices for lane closures and restoring traffic to the existing traffic pattern. The Contractor shall not close or narrow a lane of traffic on **N. Main Street (SR 6107)** during the following time restrictions:

DAY AND TIME RESTRICTIONS

**Monday through Friday: 6:00 - 9:00 A.M.
3:00 - 6:00 P.M.**

In addition, the Contractor shall not close or narrow a lane of traffic on **N. Main Street (SR 6107)**, detain and/or alter the traffic flow on or during holidays, holiday weekends, special events, or any other time when traffic is unusually heavy, including the following schedules:

HOLIDAY AND HOLIDAY WEEKEND LANE CLOSURE RESTRICTIONS

1. For **unexpected occurrence** that creates unusually high traffic volumes, as directed by the Engineer.
2. For **New Year's Day**, between the hours of **6:00 A.M.** December 31st and **6:00 P.M.** January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until **6:00 P.M.** the following Tuesday.
3. For **Easter**, between the hours of **6:00 A.M** Thursday and **6:00 P.M.** Monday.
4. For **Memorial Day**, between the hours of **6:00 A.M.** Friday and **6:00 P.M.** Tuesday.
5. For **Independence Day**, between the hours of **6:00 A.M** the day before Independence Day and **6:00 P.M.** the day after Independence Day.

If **Independence Day** is on a Friday, Saturday, Sunday or Monday, then between the hours of **6:00 A.M** the Thursday before Independence Day and **6:00 P.M.** the Tuesday after Independence Day.

6. For **Labor Day**, between the hours of **6:00 A.M** Friday and **6:00 P.M.** Tuesday.
7. For **Thanksgiving Day**, between the hours of **6:00 A.M** Tuesday and **6:00 P.M.** Monday.
8. For **Christmas**, between the hours of **6:00 A.M** the Friday before the week of Christmas Day and **6:00 P.M.** the following Tuesday after the week of Christmas Day.

Holidays and holiday weekends shall include New Year's, Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. The Contractor shall schedule his work so that lane closures will not be required during these periods, unless otherwise directed by the Engineer.

The time of availability for this intermediate contract work shall be the time the Contractor begins to install all traffic control devices for lane closures according to the time restrictions listed herein.

The completion time for this intermediate contract work shall be the time the Contractor is required to complete the removal of all traffic control devices for lane closures according to the time restrictions stated above and place traffic in the existing traffic pattern.

The liquidated damages are **One Thousand Dollars (\$1,000.00)** per hour.

MAJOR CONTRACT ITEMS:

(2-19-02)(Rev. 1-16-24)

104

SP1 G28

The following listed items are the major contract items for this contract (see Article 104-5 of the *Standard Specifications*):

Line #	Description
18	Borrow Excavation
24	4" Concrete Sidewalk

SPECIALTY ITEMS:

(7-1-95)(Rev. 1-16-24)

108-6

SP1 G37

Items listed below will be the specialty items for this contract (see Article 108-6 of the *Standard Specifications*).

Line #	Description
25	Guardrail
27	Traffic Control
28	Pavement
43	Erosion Control
46	Utility Location

FUEL PRICE ADJUSTMENT:

(8-26-19)

109-8

SP1 G44

No fuel or asphalt price adjustments will be made on this project.

CERTIFICATION FOR FEDERAL-AID CONTRACTS:

(3-21-90)

SP1 G85

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- (A) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or

employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

- (B) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, *Disclosure Form to Report Lobbying*, in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by *Section 1352, Title 31, U.S. Code*. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

Restrictions on ITS EQUIPMENT AND SERVICES:

(11-17-20)

SP01 G090

All telecommunications, video or other ITS equipment or services installed or utilized on this project must be in conformance with UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS 2 CFR, § 200.216 **Prohibition on certain telecommunications and video surveillance services or equipment.**

USE OF UNMANNED AIRCRAFT SYSTEM (UAS):

(8-20-19)

SP01 G092

The Contractor shall adhere to all Federal, State and Local regulations and guidelines for the use of Unmanned Aircraft Systems (UAS). This includes but is not limited to US 14 CFR Part 107 *Small UAS Rule*, NC GS 15A-300.2 *Regulation of launch and recovery sites*, NC GS 63-95 *Training required for the operation of unmanned aircraft systems*, NC GS 63-96 *Permit required for commercial operation of unmanned aircraft system*, and NCDOT UAS Policy. The required operator certifications include possessing a current Federal Aviation Administration (FAA) Remote Pilot Certificate, a NC UAS Operator Permit as well as operating a UAS registered with the FAA.

Prior to beginning operations, the Contractor shall complete the NCDOT UAS – Flight Operation Approval Form and submit it to the Engineer for approval. All UAS operations shall be approved by the Engineer prior to beginning the operations.

All contractors or subcontractors operating UAS shall have UAS specific general liability insurance to cover all operations under this contract.

The use of UAS is at the Contractor's discretion. No measurement or payment will be made for the use of UAS. In the event that the Department directs the Contractor to utilize UAS, payment will be in accordance with Article 104-7 Extra Work.

EQUIPMENT IDLING GUIDELINES:

(1-19-21)

SP1 G096

Exercise reduced fuel consumption and reduced equipment emissions during the construction of all work associated with this contract. Employees engaged in the construction of this project should turn off vehicles when stopped for more than thirty (30) minutes and off-highway equipment should idle no longer than fifteen (15) consecutive minutes.

These guidelines for turning off vehicles and equipment when idling do not apply to:

1. Idling when queuing.
2. Idling to verify the vehicle is in safe operating condition.
3. Idling for testing, servicing, repairing or diagnostic purposes.
4. Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane, mixing concrete, etc.).
5. Idling required to bring the machine system to operating temperature.
6. Emergency vehicles, utility company, construction, and maintenance vehicles where the engines must run to perform needed work.
7. Idling to ensure safe operation of the vehicle.
8. Idling when the propulsion engine is providing auxiliary power for other than heating or air conditioning. (such as hydraulic systems for pavers)
9. When specific traffic, safety, or emergency situations arise.
10. If the ambient temperature is less than 32 degrees Fahrenheit. Limited idling to provide for the safety of vehicle occupants (e.g. to run the heater).
11. If the ambient temperature is greater than 90 degrees Fahrenheit. Limited idling to provide for the safety of vehicle occupants of off-highway equipment (e.g. to run the air conditioning) no more than 30 minutes.
12. Diesel powered vehicles may idle for up to 30 minutes to minimize restart problems.

Any vehicle, truck, or equipment in which the primary source of fuel is natural gas or electricity is exempt from the idling limitations set forth in this special provision.

U.S. DEPARTMENT OF TRANSPORTATION HOTLINE:

(11-22-94)

108-5

SP1 G100

To report bid rigging activities call: **1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free hotline Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid

rigging, bidder collusion, or other fraudulent activities should use the hotline to report such activities.

The hotline is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

MAINTENANCE OF THE PROJECT:

(11-20-07) (Rev. 1-16-24)

104-10

SP1 G125

Revise the *Standard Specifications* as follows:

Page 1-35, Article 104-10 Maintenance of the Project, line 3, add the following after the first sentence of the first paragraph:

All guardrail/guiderail within the project limits shall be included in this maintenance.

Page 1-35, Article 104-10 MAINTENANCE OF THE PROJECT, line 8, add the following as the last sentence of the first paragraph:

The Contractor shall perform weekly inspections of guardrail and guiderail and shall report damages to the Engineer on the same day of the weekly inspection. *Where damaged guardrail or guiderail is repaired or replaced as a result of maintaining the project in* accordance with this article, such repair or replacement shall be performed within 7 consecutive calendar days of such inspection report.

Page 1-35, Article 104-10 MAINTENANCE OF THE PROJECT, lines 20-22, replace the last sentence of the last paragraph with the following:

The Contractor will not be directly compensated for any maintenance operations necessary, except for maintenance of guardrail/guiderail, as this work will be considered incidental to the work covered by the various contract items. The provisions of Article 104-7, Extra Work, and Article 104-8, Compensation and Record Keeping will apply to authorized maintenance of guardrail/guiderail. Performance of weekly inspections of guardrail/guiderail, and the damage reports required as described above, will be considered to be an incidental part of the work being paid for by the various contract items.

TWELVE MONTH GUARANTEE – LGA Projects

(10-7-13)

108

SP1 G146

- (A) The Contractor shall guarantee materials and workmanship against latent and patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve months following the date of final acceptance of the work for maintenance and shall replace such defective materials and workmanship without cost to **TOWN OF HOLLY SPRINGS**. The Contractor will not be responsible for damage due to faulty design, normal wear and tear, for negligence on the part of **TOWN OF HOLLY SPRINGS** and/or for use in excess of the design.
- (B) Where items of equipment or material carry a manufacturer's guarantee for any period in excess of twelve months, then the manufacturer's guarantee shall apply for that particular piece of equipment or material. **TOWN OF HOLLY SPRINGS'** first remedy shall be through the manufacturer although the Contractor is responsible for invoking the warranted repair work with the manufacturer. The Contractor's responsibility shall be limited to the term of the manufacturer's guarantee. **TOWN OF HOLLY SPRINGS** would be afforded the same warranty as provided by the Manufacturer.

This guarantee provision shall be invoked only for major components of work in which the Contractor would be wholly responsible for under the terms of the contract. Examples would include pavement structures, bridge components, and sign structures. This provision will not be used as a mechanism to force the Contractor to return to the project to make repairs or perform additional work that **TOWN OF HOLLY SPRINGS** would normally compensate the Contractor for. In addition, routine maintenance activities (i.e. mowing grass, debris removal, ruts in earth shoulders,) are not parts of this guarantee.

Appropriate provisions of the payment and/or performance bonds shall cover this guarantee for the project.

OUTSOURCING OUTSIDE THE USA:

(9-21-04) (Rev. 5-16-06)

SP1 G150

All work on consultant contracts, services contracts, and construction contracts shall be performed in the United States of America. No work shall be outsourced outside of the United States of America.

Outsourcing for the purpose of this provision is defined as the practice of subcontracting labor, work, services, staffing, or personnel to entities located outside of the United States.

The North Carolina Secretary of Transportation shall approve exceptions to this provision in writing.

EROSION AND SEDIMENT CONTROL/STORMWATER CERTIFICATION:

(1-16-07) (Rev 12-15-20)

105-16, 225-2, 16

SP1 G180

General

Schedule and conduct construction activities in a manner that will minimize soil erosion and the resulting sedimentation and turbidity of surface waters. Comply with the requirements herein regardless of whether or not a National Pollution discharge Elimination System (NPDES) permit for the work is required.

Establish a chain of responsibility for operations and subcontractors' operations to ensure that the *Erosion and Sediment Control/Stormwater Pollution Prevention Plan* is implemented and maintained over the life of the contract.

- (A) *Certified Supervisor* - Provide a certified Erosion and Sediment Control/Stormwater Supervisor to manage the Contractor and subcontractor operations, insure compliance with Federal, State and Local ordinances and regulations, and manage the Quality Control Program.
- (B) *Certified Foreman* - Provide a certified, trained foreman for each construction operation that increases the potential for soil erosion or the possible sedimentation and turbidity of surface waters.
- (C) *Certified Installer* - Provide a certified installer to install or direct the installation for erosion or sediment/stormwater control practices.
- (D) *Certified Designer* - Provide a certified designer for the design of the erosion and sediment control/stormwater component of reclamation plans and, if applicable, for the design of the project erosion and sediment control/stormwater plan.

Roles and Responsibilities

- (A) *Certified Erosion and Sediment Control/Stormwater Supervisor* - The Certified Supervisor shall be Level II and responsible for ensuring the erosion and sediment control/stormwater plan is adequately implemented and maintained on the project and for conducting the quality control program. The Certified Supervisor shall be on the project within 24 hours notice from initial exposure of an erodible surface to the project's final acceptance. Perform the following duties:
 - (1) *Manage Operations* - Coordinate and schedule the work of subcontractors so that erosion and sediment control/stormwater measures are fully executed for each operation and in a timely manner over the duration of the contract.
 - (a) Oversee the work of subcontractors so that appropriate erosion and sediment control/stormwater preventive measures are conformed to at each stage of the work.

- (b) Prepare the required National Pollutant Discharge Elimination System (NPDES) Inspection Record and submit to the Engineer.
 - (c) Attend all weekly or monthly construction meetings to discuss the findings of the NPDES inspection and other related issues.
 - (d) Implement the erosion and sediment control/stormwater site plans requested.
 - (e) Provide any needed erosion and sediment control/stormwater practices for the Contractor's temporary work not shown on the plans, such as, but not limited to work platforms, temporary construction, pumping operations, plant and storage yards, and cofferdams.
 - (f) Acquire applicable permits and comply with requirements for borrow pits, dewatering, and any temporary work conducted by the Contractor in jurisdictional areas.
 - (g) Conduct all erosion and sediment control/stormwater work in a timely and workmanlike manner.
 - (h) Fully perform and install erosion and sediment control/stormwater work prior to any suspension of the work.
 - (i) Coordinate with Department, Federal, State and Local Regulatory agencies on resolution of erosion and sediment control/stormwater issues due to the Contractor's operations.
 - (j) Ensure that proper cleanup occurs from vehicle tracking on paved surfaces or any location where sediment leaves the Right-of-Way.
 - (k) Have available a set of erosion and sediment control/stormwater plans that are initialed and include the installation date of Best Management Practices. These practices shall include temporary and permanent groundcover and be properly updated to reflect necessary plan and field changes for use and review by Department personnel as well as regulatory agencies.
- (2) Requirements set forth under the NPDES Permit - The Department's NPDES Stormwater permit (NCS000250) outlines certain objectives and management measures pertaining to construction activities. The permit references *NCG010000, General Permit to Discharge Stormwater* under the NPDES, and states that the Department shall incorporate the applicable requirements into its delegated Erosion and Sediment Control Program for construction activities disturbing one or more acres of land. The Department further incorporates these requirements on all contracted bridge and culvert work at jurisdictional waters, regardless of size. Some of the requirements are, but are not limited to:
- (a) Control project site waste to prevent contamination of surface or ground waters of the state, i.e. from equipment operation/maintenance, construction materials, concrete washout, chemicals, litter, fuels, lubricants, coolants, hydraulic fluids, any other petroleum products, and sanitary waste.
 - (b) Inspect erosion and sediment control/stormwater devices and stormwater discharge outfalls at least once every 7 calendar days and within 24 hours after a rainfall event equal to or greater than 1.0 inch that occurs within a 24 hour period. Additional monitoring may be required at the discretion of

Division of Water Resources personnel if the receiving stream is 303(d) listed for turbidity and the project has had documented problems managing turbidity.

- (c) Maintain an onsite rain gauge or use the Department's Multi-Sensor Precipitation Estimate website to maintain a daily record of rainfall amounts and dates.
 - (d) Maintain erosion and sediment control/stormwater inspection records for review by Department and Regulatory personnel upon request.
 - (e) Implement approved reclamation plans on all borrow pits, waste sites and staging areas.
 - (f) Maintain a log of turbidity test results as outlined in the Department's Procedure for Monitoring Borrow Pit Discharge.
 - (g) Provide secondary containment for bulk storage of liquid materials.
 - (h) Provide training for employees concerning general erosion and sediment control/stormwater awareness, the Department's NPDES Stormwater Permit NCS000250 requirements, and the applicable requirements of the *General Permit, NCG010000*.
 - (i) Report violations of the NPDES permit to the Engineer immediately who will notify the Division of Water Quality Regional Office within 24 hours of becoming aware of the violation.
- (3) Quality Control Program - Maintain a quality control program to control erosion, prevent sedimentation and follow provisions/conditions of permits. The quality control program shall:
- (a) Follow permit requirements related to the Contractor and subcontractors' construction activities.
 - (b) Ensure that all operators and subcontractors on site have the proper erosion and sediment control/stormwater certification.
 - (c) Notify the Engineer when the required certified erosion and sediment control/stormwater personnel are not available on the job site when needed.
 - (d) Conduct the inspections required by the NPDES permit.
 - (e) Take corrective actions in the proper timeframe as required by the NPDES permit for problem areas identified during the NPDES inspections.
 - (f) Incorporate erosion control into the work in a timely manner and stabilize disturbed areas with mulch/seed or vegetative cover on a section-by-section basis.
 - (g) Use flocculants approved by state regulatory authorities where appropriate and where required for turbidity and sedimentation reduction.
 - (h) Ensure proper installation and maintenance of temporary erosion and sediment control devices.
 - (i) Remove temporary erosion or sediment control devices when they are no longer necessary as agreed upon by the Engineer.
 - (j) The Contractor's quality control and inspection procedures shall be subject to review by the Engineer. Maintain NPDES inspection records and make records available at all times for verification by the Engineer.

- (B) *Certified Foreman* - At least one Certified Foreman shall be onsite for each type of work listed herein during the respective construction activities to control erosion, prevent sedimentation and follow permit provisions:

- (1) Foreman in charge of grading activities
- (2) Foreman in charge of bridge or culvert construction over jurisdictional areas
- (3) Foreman in charge of utility activities

The Contractor may request to use the same person as the Level II Supervisor and Level II Foreman. This person shall be onsite whenever construction activities as described above are taking place. This request shall be approved by the Engineer prior to work beginning.

The Contractor may request to name a single Level II Foreman to oversee multiple construction activities on small bridge or culvert replacement projects. This request shall be approved by the Engineer prior to work beginning.

- (C) *Certified Installers* - Provide at least one onsite, Level I Certified Installer for each of the following erosion and sediment control/stormwater crew:

- (1) Seeding and Mulching
- (2) Temporary Seeding
- (3) Temporary Mulching
- (4) Sodding
- (5) Silt fence or other perimeter erosion/sediment control device installations
- (6) Erosion control blanket installation
- (7) Hydraulic tackifier installation
- (8) Turbidity curtain installation
- (9) Rock ditch check/sediment dam installation
- (10) Ditch liner/matting installation
- (11) Inlet protection
- (12) Riprap placement
- (13) Stormwater BMP installations (such as but not limited to level spreaders, retention/detention devices)
- (14) Pipe installations within jurisdictional areas

If a Level I *Certified Installer* is not onsite, the Contractor may substitute a Level II Foreman for a Level I Installer, provided the Level II Foreman is not tasked to another crew requiring Level II Foreman oversight.

- (D) *Certified Designer* - Include the certification number of the Level III Certified Designer on the erosion and sediment control/stormwater component of all reclamation plans and if applicable, the certification number of the Level III Certified Designer on the design of the project erosion and sediment control/stormwater plan.

Preconstruction Meeting

Furnish the names of the *Certified Erosion and Sediment Control/Stormwater Supervisor*, *Certified Foremen*, *Certified Installers* and *Certified Designer* and notify the Engineer of changes in certified personnel over the life of the contract within 2 days of change.

Ethical Responsibility

Any company performing work for the North Carolina Department of Transportation has the ethical responsibility to fully disclose any reprimand or dismissal of an employee resulting from improper testing or falsification of records.

Revocation or Suspension of Certification

Upon recommendation of the Chief Engineer to the certification entity, certification for *Supervisor*, *Certified Foremen*, *Certified Installers* and *Certified Designer* may be revoked or suspended with the issuance of an *Immediate Corrective Action (ICA)*, *Notice of Violation (NOV)*, or *Cease and Desist Order* for erosion and sediment control/stormwater related issues.

The Chief Engineer may recommend suspension or permanent revocation of certification due to the following:

- (A) Failure to adequately perform the duties as defined within this certification provision.
- (B) Issuance of an ICA, NOV, or Cease and Desist Order.
- (C) Failure to fully perform environmental commitments as detailed within the permit conditions and specifications.
- (D) Demonstration of erroneous documentation or reporting techniques.
- (E) Cheating or copying another candidate's work on an examination.
- (F) Intentional falsification of records.
- (G) Directing a subordinate under direct or indirect supervision to perform any of the above actions.
- (H) Dismissal from a company for any of the above reasons.
- (I) Suspension or revocation of one's certification by another entity.

Suspension or revocation of a certification will be sent by certified mail to the certificant and the Corporate Head of the company that employs the certificant.

A certificant has the right to appeal any adverse action which results in suspension or permanent revocation of certification by responding, in writing, to the Chief Engineer within 10 calendar days after receiving notice of the proposed adverse action.

Chief Engineer
1536 Mail Service Center
Raleigh, NC 27699-1536

Failure to appeal within 10 calendar days will result in the proposed adverse action becoming effective on the date specified on the certified notice. Failure to appeal within the time specified will result in a waiver of all future appeal rights regarding the adverse action taken. The certificant will not be allowed to perform duties associated with the certification during the appeal process.

The Chief Engineer will hear the appeal and make a decision within 7 days of hearing the appeal. Decision of the Chief Engineer will be final and will be made in writing to the certificant.

If a certification is temporarily suspended, the certificant shall pass any applicable written examination and any proficiency examination, at the conclusion of the specified suspension period, prior to having the certification reinstated.

Measurement and Payment

Certified Erosion and Sediment Control/Stormwater Supervisor, Certified Foremen, Certified Installers and Certified Designer will be incidental to the project for which no direct compensation will be made.

PROCEDURE FOR MONITORING BORROW PIT DISCHARGE:

(2-20-07) (Rev. 1-16-24)

105-16, 230, 801

SP1 G181

Water discharge from borrow pit sites shall not cause surface waters to exceed 50 NTUs (nephelometric turbidity unit) in streams not designated as trout waters and 10 NTUs in streams, lakes or reservoirs designated as trout waters. For lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTUs. If the turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased.

If during any operating day, the downstream water quality exceeds the standard, the Contractor shall do all of the following:

- (A) Either cease discharge or modify the discharge volume or turbidity levels to bring the downstream turbidity levels into compliance, or
- (B) Evaluate the upstream conditions to determine if the exceedance of the standard is due to natural background conditions. If the background turbidity measurements exceed the standard, operation of the pit and discharge can continue as long as the stream turbidity levels are not increased due to the discharge.
- (C) Measure and record the turbidity test results (time, date and sampler) at all defined sampling locations 30 minutes after startup and at a minimum, one additional sampling of all sampling locations during that 24-hour period in which the borrow pit is discharging.
- (D) Notify DWQ within 24 hours of any stream turbidity standard exceedances that are not brought into compliance.

During the Environmental Assessment required by Article 230-4 of the *Standard Specifications*, the Contractor shall define the point at which the discharge enters into the State's surface waters

and the appropriate sampling locations. Sampling locations shall include points upstream and downstream from the point at which the discharge enters these waters. Upstream sampling location shall be located so that it is not influenced by backwater conditions and represents natural background conditions. Downstream sampling location shall be located at the point where complete mixing of the discharge and receiving water has occurred.

The discharge shall be closely monitored when water from the dewatering activities is introduced into jurisdictional wetlands. Any time visible sedimentation (deposition of sediment) on the wetland surface is observed, the dewatering activity will be suspended until turbidity levels in the stilling basin can be reduced to a level where sediment deposition does not occur. Staining of wetland surfaces from suspended clay particles, occurring after evaporation or infiltration, does not constitute sedimentation. No activities shall occur in wetlands that adversely affect the functioning of a wetland. Visible sedimentation will be considered an indication of possible adverse impacts on wetland use.

The Engineer will perform independent turbidity tests on a random basis. These results will be maintained in a log within the project records. Records will include, at a minimum, turbidity test results, time, date and name of sampler. Should the Department's test results exceed those of the Contractor's test results, an immediate test shall be performed jointly with the results superseding the previous test results of both the Department and the Contractor.

The Contractor shall use the *NCDOT Turbidity Reduction Options for Borrow Pits Matrix*, available at <https://connect.ncdot.gov/resources/roadside/FieldOperationsDocuments/TurbidityReductionOptionSheet.pdf> to plan, design, construct, and maintain BMPs to address water quality standards. Tier I Methods include stilling basins which are standard compensatory BMPs. Other Tier I methods are noncompensatory and shall be used when needed to meet the stream turbidity standards. Tier II Methods are also noncompensatory and are options that may be needed for protection of rare or unique resources or where special environmental conditions exist at the site which have led to additional requirements being placed in the DWQ's 401 Certifications and approval letters, Isolated Wetland Permits, Riparian Buffer Authorization or a DOT Reclamation Plan's Environmental Assessment for the specific site. Should the Contractor exhaust all Tier I Methods on a site exclusive of rare or unique resources or special environmental conditions, Tier II Methods may be required by regulators on a case by case basis per supplemental agreement.

The Contractor may use cation exchange capacity (CEC) values from proposed site borings to plan and develop the bid for the project. CEC values exceeding 15 milliequivalents per 100 grams of soil may indicate a high potential for turbidity and should be avoided when dewatering into surface water is proposed.

No additional compensation for monitoring borrow pit discharge will be paid.

PROJECT SPECIAL PROVISIONS

ROADWAY

CLEARING AND GRUBBING - METHOD III:

(4-6-06) (Rev. 3-19-24)

200

SP2 R02B

Perform clearing on this project to the limits established by Method - III shown on Standard Drawing No. 200.03 of the *Roadway Standard Drawings*. Conventional clearing methods may be used except where permit drawings or conditions have been included in the proposal which require certain areas to be cleared by hand methods.

SHOULDER AND FILL SLOPE MATERIAL:

(5-21-02)(Rev. 1-16-24)

235, 560

SP2 R45 B

Description

Perform the required shoulder and slope construction for this project in accordance with the applicable requirements of Section 560 and Section 235 of the *Standard Specifications*.

Measurement and Payment

When the Contractor elects to obtain material from an area located beneath a proposed fill sections which does not require excavation for any reason other than to generate acceptable shoulder and fill slope material, the work of performing the excavation will be considered incidental to the item of *Borrow Excavation* or *Shoulder Borrow*. If there is no pay item for *Borrow* or *Shoulder Borrow* in the contract, this work will be considered incidental to *GRADING*. Stockpile the excavated material in a manner to facilitate measurement by the Engineer. Fill the void created by the excavation of the shoulder and fill slope material with suitable material. Payment for material used from the stockpile will be made at the contract unit price for *Borrow Excavation* or *Shoulder Borrow*. If there is no pay item for *Borrow Excavation* or *Shoulder Borrow*, then the material will be paid for at the contract unit price for *GRADING*. The material used to fill the void created by the excavation of the shoulder and fill slope material will be considered incidental to *GRADING* item.

Material generated from undercut excavation, unclassified excavation or clearing and grubbing operations that is placed directly on shoulders or slope areas, will not be measured separately for payment, as payment for the work requiring the excavation will be considered adequate compensation for depositing and grading the material on the shoulders or slopes.

When undercut excavation is performed at the direction of the Engineer and the material excavated is found to be suitable for use as shoulder and fill slope material, and there is no area on the project currently prepared to receive the material generated by the undercut operation, the Contractor may construct a stockpile for use as borrow at a later date. Payment for the material used from the stockpile will be considered incidental to *GRADING*

When shoulder material is obtained from borrow sources or from stockpiled material, payment for the work of shoulder construction will be made considered incidental to GRADING.

CONSTRUCTION SURVEYING:

(10-21-20)

Description

When required by the Contract, provide all construction layout, surveying, stakeout, supplemental surveying, field and office calculations, supplemental surveying and engineering necessary for the proper control of construction operations in accordance with this section and the NCDOT "Manual on Construction Layout", or unless otherwise specified herein. The NCDOT Manual for Uniform Construction may be obtained from the NCDOT Construction Unit or at the following web links:

<https://connect.ncdot.gov/projects/construction/Construction%20%20Stakeout%20Manual/Construction%20Stakeout%20Manual.pdf> and

<https://connect.ncdot.gov/projects/construction/Construction%20Manual/Construction%20Manual%20Engineering%20Control%202013.pdf>

General

- i. The Contractor shall be responsible for the preservation of centerline or baseline control and benchmarks. The Contractor shall establish and identify clearing limits. The Contractor shall provide all additional stakes including but not limited to centerline, Y- Line, connections, ramps, loops, slope stakes, right of way markers, fine grade stakes, construction benchmarks, and other reference marks or points that may be necessary to provide alignments and grades for construction of all roadway, structure, and miscellaneous items.
- ii. Perform any staking or re-staking as deemed necessary by the Engineer to ensure all project improvements and miscellaneous items are constructed in accordance with the established lines and grades. It shall be the responsibility of the Contractor to advise the Engineer of horizontal or vertical alignment revisions or plan revisions necessary needed to establish smooth transitions to existing facilities. Payment for such additional surveying or re-staking, field and office calculations shall be at no cost to the Town of Holly Springs.
- iii. The benchmarks furnished by the Contractor's Surveyor and established by the Contractor's Surveyor shall be preserved and protected. Any benchmarks conflicting with the construction of the project will be relocated by the Contractor's Surveyor, at no additional expense to the Owner. Any temporary benchmarks which are needed for construction shall be established by the Contractor at no additional expense to the Owner.

- iv. Set stakes to establish lines and grades for subgrade, base, curb, and related items at intervals along the line of work not greater than 50 feet. When the Engineer determines that horizontal or vertical alignments require the spacing of the stakes to be closer than 50 feet, the stakes shall be set accordingly at no additional expense to the Owner.
- v. Fine grade or other intermediate grade stakes required for the construction of the project shall be set as the work progresses. Fine grade hubs (blue tops) shall be set on both sides of each roadbed with distances and grades referenced to either the finished centerline or edge of pavement grade, as appropriate in accordance with the NCDOT Manual of Uniform Construction Layout.
- vi. Grade stakes shall be set at intervals specified herein but at offsets determined by the Contractor to facilitate checking of all subgrade, base, curb, and pavement elevations including those in ramps, streets, driveways, crossovers, intersections, and irregular shaped areas. The Contractor shall set slope stakes at all stations and half stations in accordance with the procedures established in the NCDOT "Manual on Construction Layout".

Construction Methods

- i. Furnish personnel who are under the direct supervision of an engineer or land surveyor licensed by the State of North Carolina NCGS §89C and in good standing with the North Carolina Board of Engineers and Land Surveyors.
- ii. Furnish personnel who are experienced in highway and bridge construction surveying and are capable of accurately establishing all line and grade points necessary to complete the work in accordance with the plan dimensions with the precision established in the NCDOT Manual for Construction Layout. Consult the Engineer for clarification of the plans.
- iii. All surveying equipment, stakes, and any material and equipment necessary to perform the work shall be furnished by the Contractor as part of the established line item unit bid price for "Construction Surveying" as indicated in the Itemized Proposal.
- iv. Perform all contract surveying work in a safe manner and conform to Subarticle 107-21 "Safety and Accident Protection" of the latest version of the NCDOT Standard Specifications, at no additional expense to the Owner.
- v. Perform any flagging operations or other traffic control in accordance with the most recent copy of the MUTCD and Section 1150 of the latest version of the NCDOT Standard Specifications at no additional cost to the Owner.
- vi. Perform surveying along all portions of ramps, bridges, roadways, sidewalks, and all other roadways in accordance with the traffic control requirements provided in

the NCDOT Encroachment Agreement at no additional cost to the Owner.

- vii. The Contractor may elect to use global positioning system (GPS) surveying, either static or kinematic. Perform GPS surveys with same or higher order of accuracy as conventional surveys detailed in the NCDOT *Manual for Construction Layout*.
- viii. Investigate the plan horizontal alignment, vertical profile and super elevation of existing facilities that tie to proposed roadways. Investigate 100 ft beyond all paving limits and revise grades as needed to establish smooth transitions to the existing facilities at no additional expense to the Owner.
- ix. Tie existing sidewalks to proposed facilities within the limits detailed in the plans and within the gradients detailed in the NCDOT *Roadway Standard Drawings or as shown on the plans*.
- x. The Engineer reserves the right to check, correct where necessary or require any layout work to be revised. The Contractor will perform checks to ensure the roadway, bridge, structures and incidental items are surveyed in accordance with the plans and the NCDOT *Manual for Construction Layout*. at no additional expense to the Owner.
- xi. The Owner's review of the Contractor's work in no way relieves the Contractor of responsibility for conformance with the contract. Failure by the Engineer or inspector to point out unsatisfactory work, from lack of discovery or for any other reason, in no way prevents later rejection or corrections to the unsatisfactory work, when discovered. No claims for compensation or time will be allowed for losses suffered due to any necessary removals or repairs resulting from the unsatisfactory work.
- xii. When requested by the Engineer or as noted in the plans, check the accuracy of the stakeout including an independent bridge stakeout/layout. Notify the Engineer of any inaccuracies and take action to correct all inaccuracies in the construction stakeout before performing the affected work at no additional expense to the Owner.
- xiii. When the Contractor proposes an alteration to the plans to rectify a construction stakeout error, submit alterations to the Engineer for review and approval. Include design calculations and drawings sealed by an engineer licensed by the State of North Carolina along with a narrative describing justification for the alteration at no additional expense to the Owner.

Horizontal and Vertical Control

- i. The Contractor is responsible to furnish horizontal and set horizontal baseline control on approximate 1,000 ft intervals and vertical control on approximate 2,500 ft intervals within the project limits. The Contractor may adjust these parameters dependent on the nature and size of the project.

- ii. Obtain a copy of the electronic survey control files from the Engineer. Clearing limits may be established during original traverse of baseline control provided the accuracy ratio does not exceed 1 ft per 5,000 ft of perimeter and all Contractor established baseline control is protected and preserved during clearing operations.
- iii. Before performing any additional construction layout, verify the horizontal baseline control by a closed traverse survey or alternate approved method. The accuracy ratio shall not exceed an error of closure of 1 ft per 20,000 ft of perimeter.
- iv. Verify the vertical control by performing a closed loop survey using differential leveling. For the error of closure, do not exceed 0.05 ft times the square root of the miles:

$$\text{Error of Closure} :: 0.05 \sqrt{x} \text{ miles}$$
- v. Notify the Engineer of any discrepancies in either the horizontal or vertical control. Reference, outside of the proposed construction limits and evenly distributed throughout the project limits, a minimum of 50% of the projects' horizontal and vertical control. Provide reference information to the Engineer.
- vi. If GPS is used, occupy the azimuth pairs with the base station during verification of baseline control, otherwise, occupy baseline. Verify remaining baseline control using a Rover. Submit coordinate data showing differences between supplied baseline coordinates and field obtained GPS coordinates. Include report detailing the use of preliminary input data, specifically rotation, scaling and translation.
- vii. Using the horizontal and vertical control established by the Contractor Surveyor, provide surveying necessary to construct all roadway, structure and miscellaneous items as detailed in the plans. Perform staking in accordance with the NCDOT *Manual for Construction Layout*. Layout the work and provide all measurements that may be required for the execution of the construction in conformity with the contract.

Right of Way, Control of Access and Easements

- i. The Contractor Surveyor will establish the location of all proposed right-of-way markers, construction easements, sidewalk easements, slope easements, control-of-access markers and temporary drainage and permanent drainage easements as shown in the plans at no additional expense to the Owner.
- ii. Reference the location of all proposed markers and permanent drainage easements. Restore right-of-way and control-of-access monument positions after completion of construction. Set a right-of-way or control-of-access monument cap on an 18" long 12 #5 reinforcing bar and a "carsonite" NCDOT type witness stake at no additional

expense to the Owner; unless concrete right-of-way and control of-access markers are specified in the contract. The Contractor will provide any monument caps. The Contractor shall provide witness stakes. Re-establish location of permanent drainage easements or right- of-way after completion of construction and install an 18" long #5 reinforcing bar for monumentation with a final as-built survey of these points at no additional expense to the Owner.

- iii. Validate the position of the markers and permanent drainage easement locations with those detailed in the plans. Report any discrepancies to the Engineer.

Drainage and Utility Construction Systems

General

- i. Where underground conflicts are suspected whether shown in the plans or not, contact utility owners and locate all utilities horizontally and vertically at no additional expense to the Owner.
- ii. Consider the utilities' locations and elevations in the layout of the drainage systems and utility construction systems. Utilities may exist that are not depicted in the plans.
- iii. Submit (2) two copies of all layout drawings for traffic signals, drainage systems, underdrain systems, subdrain systems, traffic signal and utility construction systems to the Engineer for his review and approval. The Engineer will note the review and approval by adding an appropriate note to the drawings along with the date and his signature. The Engineer will retain a copy of the drawings and a copy will be returned to the Contractor.

Drainage Systems

- i. Provide construction layout of drainage systems, as depicted in the plans and in accordance with the NCDOT *Guidelines for Drainage Studies and Hydraulic Design* located at:
[https://connect.ncdot.gov/resources/hydro/Guidelines%20for%20Drainage%20Study%20Documents/Guidelines%20for%20Drainage%20Studies%20and%20Hydraulic%20Design%20\(March%201999\).pdf](https://connect.ncdot.gov/resources/hydro/Guidelines%20for%20Drainage%20Study%20Documents/Guidelines%20for%20Drainage%20Studies%20and%20Hydraulic%20Design%20(March%201999).pdf)
- ii. Consider the locations and elevations of all existing and proposed utilities, proposed utility construction and existing and proposed drainage systems, in the layout of the drainage system.
- iii. Modifications of the drainage plan may be necessary to properly collect and transport water. Advise the Engineer if modifications are needed to achieve the original design functionality and the intent of the drainage plans, such as adjusting the location of a drainage structure, adding a drainage structure and increasing or decreasing pipe lengths. The Engineer will review any major modifications.
- iv. Provide layout drawing of the drainage system including calculations of flow line

elevations for all drainage structures; pipe invert elevations, both inlet and outlet of the drainage structure; grade of each pipe within the drainage system; elevation of any existing facility connection, such as stream or pipe; if necessary; headwall location, if depicted in the plans; and locations and elevations of any existing or proposed utilities to the Engineer for review and approval at least 7 days before beginning work on the drainage system.

- v. Modification of the submitted drainage layout drawing by the Engineer will not eliminate the Contractor's liability for the accuracy of the information submitted. Any re-staking or additional staking required to conform with the approved drainage layout drawing is incidental to the work of "Construction Surveying" and no direct compensation will be made.

Utility Construction

- i. Provide utility construction layout as detailed in the contract. Consider the locations and elevations of all existing and proposed utilities. Proposed utility construction and existing and proposed drainage systems in the layout of the utility and traffic signal construction.
- ii. Advise the Engineer if modifications to the utility construction are necessary. The Engineer will review any major modifications.
- iii. Modification of the submitted utility construction layout drawing by the Engineer will not eliminate the Contractor's liability for the accuracy of the information submitted. Any restaking or additional staking required to conform with the approved utility layout drawing is incidental to the work. Modifications to construction layout and drawings, additional staking or restaking is considered incidental to the work of "Construction Surveying" and no direct compensation will be made.

Signs

- i. Contractor Surveyor shall stake horizontal locations of all ground mounted, overhead and Type A and B ground-mounted signs and streetlights pole locations for Engineer's verification before obtaining S-dimensions or installation of streetlight conduit.
- ii. Measure or calculate overhead and ground-mounted sign S-dimensions in accordance with the plans and the NCDOT *Manual for Construction Layout*.
- iii. Perform investigation of all proposed sign locations, streetlight locations and notify the Engineer of any obstructions, either existing or proposed, that may interfere with the proposed sign installation or streetlight installation by Duke Progress Energy.
- iv. Submit sign information to the Engineer. Stake horizontal locations of all

ground mounted and barrier mounted signs as part of the unit bid line item lump sum price established in the Itemized Proposal for “Construction Surveying”.

As-Built Survey

- i. Conduct a field record survey of as-built project improvements by a NC Registered Professional Land Surveyor and provide resulting data to the project Engineer in print and digital formats. Maintain as-built plans daily to the satisfaction of NCDOT and Town of Holly Springs and Owner’s Representative.
- ii. Upon substantial completion of all work, the Contractor shall provide submittal of two (2) sets of as-built plans to the Owner.
- iii. Contractor shall coordinate with the Engineer and his representative during the life of the project in the production and data/recording of as-built plans that are acceptable to NCDOT. This will be considered a requirement for acceptance of the project for maintenance by NCDOT. This work shall be included in unit bid price for “Construction Surveying” as indicated in the Bid Proposal. The Contractor shall provide this final deliverable prior substantial completion.
- iv. All mapped improvements shall be on an accurate graphical representation, neatly lettered, properly dimensioned and identified on a mylar reproducible tracing 22” x 34” in size at scale that matches the construction plans.
- v. Identification and location of site improvements shall conform to the recommended standards of the North Carolina Licensing Board for Professional Engineers and Land Surveyors. Record Survey is to be provided by the Contractor.
 - a. Limits: The subject property as defined by the Contract Documents.
 - b. Control: Vertical control shall be based on the benchmarks on the site. Baselines shall be established in such a manner as to accurately locate spot elevations in a 50 foot minimum grid pattern. All top and toe slopes with centerline of draws and ditches shall be located.
 - c. Improvements: All planimetric information shall be tied to the established grid. Contours shall be drawn at a 1 foot interval with spot elevations at high and low points. Within the area to be surveyed, locate all improvements and identify the following:
 - Finished grades.
 - Any water and sewer utility work installed
 - Revised roadway or bridge surveys or elevations different from plans.
 - Curbing, walks and paving.
 - Curb cuts and access drives.

- Storm drainage improvements (with invert elevations, rim elevations and pipe lengths).
 - Curb ramps.
 - All bridge data, vertical clearance data and other data required by NCDOT for acceptance of maintenance.
- vi. Upon completion of record survey, submit in print and digital format to the Engineer for the Owner's record.
- vii. No additional compensation will be provided for As-Built Surveys as these costs associated with this work will be considered incidental to "Construction Surveying" at the established line item unit price per lump sum identified in the Itemized Proposal.

Measurement and Payment

- i. Payment at the contract lump sum price for "Construction Surveying" will be made for providing all construction layout, surveying, stakeout, and engineering as noted within this section as necessary for the proper construction operations to construct the project in accordance with the lines, grades, and dimensions detailed in the plans and provisions.
- ii. The Contractor shall submit a certified statement each month indicating the percentage of "*Construction Surveying*" work completed. The Engineer will determine if the amount indicated is reasonably correct and the Engineer will pay accordingly on the next partial pay estimate.
- iii. Establishment of baseline alignments or cross sectioning for borrow or grading along the project and any surveying within each borrow pit is incidental to "*Construction Surveying*" and no direct payment will be made.
- iv. Such price and payment will be full compensation for construction surveying for all project improvements, coordination with Engineer of Record, stakeout, As-Built Plans, construction layout, furnishing competent surveying personnel, vehicles, mobilization, incidentals, record keeping, traffic control for surveying, surveying equipment, stakes, markings, reference points, dimensional sketches, surveying sketches, submittals, clearing limit delineations, independent surveying, surveying for relocation of utility conflicts, surveying for streetlight, layout for guardrail improvements, traffic control baseline layout and stakeout, locations, surveying calculations, stakeout records, certifying as-builts, electronic files, manuscripts, records, materials, staking and establishing of right-of-way and easements, and all incidentals necessary to satisfactorily perform "Construction Surveying".
- v. Such price and payment at the lump sum unit price as established in the Itemized Proposal for "Construction Surveying" will be full compensation for any independent, supplemental surveying or investigative surveying and shall include but not be limited to furnishing personnel; all surveying equipment, stakes, sketches,

calculations, stakeout records and as-builts; and any materials, staking of easements and rights of way and equipment necessary to perform the supplement surveying or investigative surveying.

- vi. Partial payments for the item of "Construction Surveying" will be made on each particular payment estimate based upon the percentage complete of the item of "Construction Surveying" as determined by the Engineer.
- vii. Compensation for "Construction Surveying" will also be full and completion compensation for the stakeout of the roadway survey alignments for intermediate cross sections when deemed necessary by the Engineer or Contractor.
- viii. If the Engineer determines intermediate cross sections are not necessary for computing partial payments (i.e., lump sum comprehensive grading), the intermediate stakeout of the survey line is incidental to the work and no additional compensation will be made.
- ix. Payment will be made under: "Construction Surveying" at the established line item unit price bid Lump Sum as indicated in the Itemized Proposal.

PROJECT SPECIAL PROVISIONS

EROSION CONTROL

STABILIZATION REQUIREMENTS:

(3-11-2016)

Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-010000 general construction permit effective April 1, 2019 issued by the North Carolina Department of Environmental Quality Division of Water Resources. Temporary or permanent ground cover stabilization shall occur within 7 calendar days from the last land-disturbing activity, with the following exceptions in which temporary or permanent ground cover shall be provided in 14 calendar days from the last land-disturbing activity:

- Slopes between 2:1 and 3:1, with a slope length of 10 ft. or less
- Slopes 3:1 or flatter, with a slope of length of 50 ft. or less
- Slopes 4:1 or flatter

The stabilization timeframe for High Quality Water (HQP) Zones shall be 7 calendar days with no exceptions for slope grades or lengths. High Quality Water Zones (HQP) Zones are defined by North Carolina Administrative Code 15A NCAC 04A.0105 (25). Temporary and permanent ground cover stabilization shall be achieved in accordance with the provisions in this contract and as directed.

SEEDING AND MULCHING:

(East)

The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

All Roadway Areas

March 1 - August 31

50#	Tall Fescue
10#	Centipede
25#	Bermudagrass (hulled)
500#	Fertilizer
4000#	Limestone

September 1 - February 28

50#	Tall Fescue
10#	Centipede
35#	Bermudagrass (unhulled)
500#	Fertilizer
4000#	Limestone

Waste and Borrow Locations

March 1 – August 31

75#	Tall Fescue
25#	Bermudagrass (hulled)
500#	Fertilizer
4000#	Limestone

September 1 - February 28

75#	Tall Fescue
35#	Bermudagrass (unhulled)
500#	Fertilizer
4000#	Limestone

Note: 50# of Bahiagrass may be substituted for either Centipede or Bermudagrass only upon Engineer's request.

Approved Trall Fescue Cultivars

06 Dust	Escalade	Justice	Serengeti
2 nd Millennium	Essential	Kalahari	Shelby
3 rd Millennium	Evergreen 2	Kitty Hawk 2000	Sheridan
Apache III	Falcon IV	Legitimate	Signia
Avenger	Falcon NG	Lexington	Silver Hawk
Barlexas	Falcon V	LSD	Sliverstar
Barlexas II	Faith	Magellan	Shenandoah Elite
Bar Fa	Fat Cat	Matador	Sidewinder
Barrera	Festnova	Millennium SRP	Skyline
Barrington	Fidelity	Monet	Solara
Barrobusto	Finelawn Elite	Mustang 4	Southern Choice II
Barvado	Finelawn Xpress	Ninja 2	Speedway
Biltmore	Finesse II	Ol' Glory	Spyder LS
Bingo	Firebird	Olympic Gold	Sunset Gold
Bizem	Firecracker LS	Padre	Taccoa
Blackwatch	Firenza	Patagonia	Tanzania
Blade Runner II	Five Point	Pedigree	Trio
Bonsai	Focus	Picasso	Tahoe II
Braveheart	Forte	Piedmont	Talladega
Bravo	Garrison	Plantation	Tarheel
Bullseye	Gazelle II	Proseeds 5301	Terrano
Cannavaro	Gold Medallion	Prospect	Titan Ltd
Catalyst	Grande 3	Pure Gold	Titanium LS
Cayenne	Greenbrooks	Quest	Tracer
Cessane Rz	Greenkeeper	Raptor II	Traverse SRP
Chipper	Gremlin	Rebel Exeda	Tulsa Time
Cochise IV	Greystone	Rebel Sentry	Turbo
Constitution	Guardian 21	Rebel IV	Turbo RZ
Corgi	Guardian 41	Regiment II	Tuxedo RZ
Corona	Hemi	Regenerate	Ultimate
Coyote	Honky Tonk	Rendition	Venture
Darlington	Hot Rod	Rhambler 2 SRP	Umbrella
Davinci	Hunter	Rembrandt	Van Gogh
Desire	Inferno	Reunion	Watchdog
Dominion	Innovator	Riverside	Wolfpack II
Dynamic	Integrity	RNP	Xtremegreen
Dynasty	Jaguar 3	Rocket	
Endeavor	Jamboree	Scorpion	

On cut and fill slopes 2:1 or steeper Centipede shall be applied at the rate of 5 pounds per acre and add 20# of Sericea Lespedeza from January 1 - December 31.

Fertilizer shall be 10-20-20 analysis. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis and as directed.

TEMPORARY SEEDING:

Fertilizer shall be the same analysis as specified for *Seeding and Mulching* and applied at the rate of 400 pounds and seeded at the rate of 50 pounds per acre. Sweet Sudan Grass, German Millet or Browntop Millet shall be used in summer months and Rye Grain during the remainder of the year. The Engineer will determine the exact dates for using each kind of seed.

FERTILIZER TOPDRESSING:

Fertilizer used for topdressing on all roadway areas except slopes 2:1 and steeper shall be 10-20-20 grade and shall be applied at the rate of 500 pounds per acre. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as 10-20-20 analysis and as directed.

Fertilizer used for topdressing on slopes 2:1 and steeper and waste and borrow areas shall be 16-8-8 grade and shall be applied at the rate of 500 pounds per acre. A different analysis of fertilizer may be used provided the 2-1-1 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as 16-8-8 analysis and as directed.

SUPPLEMENTAL SEEDING:

The kinds of seed and proportions shall be the same as specified for *Seeding and Mulching*, with the exception that no centipede seed will be used in the seed mix for supplemental seeding. The rate of application for supplemental seeding may vary from 25# to 75# per acre. The actual rate per acre will be determined prior to the time of topdressing and the Contractor will be notified in writing of the rate per acre, total quantity needed, and areas on which to apply the supplemental seed. Minimum tillage equipment, consisting of a sod seeder shall be used for incorporating seed into the soil as to prevent disturbance of existing vegetation. A clodbuster (ball and chain) may be used where degree of slope prevents the use of a sod seeder.

MOWING:

The minimum mowing height on this project shall be 4 inches.

MINIMIZE REMOVAL OF VEGETATION:

The Contractor shall minimize removal of vegetation within project limits to the maximum extent practicable. Vegetation along stream banks and adjacent to other jurisdictional resources outside the construction limits shall only be removed upon approval of Engineer. No additional payment will be made for this minimization work.

CONSTRUCTION MATERIALS MANAGEMENT

(3-19-19) (rev. 04-27-20)

Description

The requirements set forth shall be adhered to in order to meet the applicable materials handling requirements of the NCG010000 permit. Structural controls installed to manage construction materials stored or used on site shall be shown on the E&SC Plan. Requirements for handling materials on construction sites shall be as follows:

Polyacrylamides (PAMS) and Flocculants

Polyacrylamides (PAMS) and flocculants shall be stored in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures designed to protect adjacent surface waters. PAMS or other flocculants used shall be selected from the NC DWR List of Approved PAMS/Flocculants. The concentration of PAMS and other flocculants used shall not exceed those specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions. The NC DWR List of Approved PAMS/Flocculants is available at:

https://files.nc.gov/ncdeq/Water+Quality/Environmental+Sciences/ATU/PAM8_30_18.pdf

Equipment Fluids

Fuels, lubricants, coolants, and hydraulic fluids, and other petroleum products shall be handled and disposed of in a manner so as not to enter surface or ground waters and in accordance with applicable state and federal regulations. Equipment used on the site must be operated and maintained properly to prevent discharge of fluids. Equipment, vehicle, and other wash waters shall not be discharged into E&SC basins or other E&SC devices. Alternative controls should be provided such that there is no discharge of soaps, solvents, or detergents.

Waste Materials

Construction materials and land clearing waste shall be disposed of in accordance with North Carolina General Statutes, Chapter 130A, Article 9 - Solid Waste Management, and rules governing the disposal of solid waste (15A NCAC 13B). Areas dedicated for managing construction material and land clearing waste shall be at least 50 feet away from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. Paint and other liquid construction material waste shall not be dumped into storm drains. Paint and other liquid construction waste washouts should be located at least 50 feet away from storm drain inlets unless there is no alternative. Other options are to install lined washouts or use portable, removable bags or bins. Hazardous or toxic waste shall be managed in accordance with the federal Resource Conservation and Recovery Act (RCRA) and NC Hazardous Waste Rules at 15A NCAC, Subchapter 13A. Litter and sanitary waste shall be managed in a manner to prevent it from entering jurisdictional waters and shall be disposed of offsite.

Herbicide, Pesticide, and Rodenticides

Herbicide, pesticide, and rodenticides shall be stored and applied in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act, North Carolina Pesticide Law of 1971 and labeling restrictions.

Concrete Materials

Concrete materials onsite, including excess concrete, must be controlled and managed to avoid contact with surface waters, wetlands or buffers. No concrete or cement slurry shall be discharged from the site. (Note that discharges from onsite concrete plants require coverage under a separate NPDES permit – NCG140000.) Concrete wash water shall be managed in accordance with the *Concrete Washout Structure* provision. Concrete slurry shall be managed and disposed of in accordance with *NCDOT DGS and HOS DCAR Distribution of Class A Residuals Statewide* (Permit No. WQ0035749). Any hardened concrete residue will be disposed of, or recycled on site, in accordance with state solid waste regulations.

Earthen Material Stock Piles

Earthen material stock piles shall be located at least 50 feet away from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available.

Measurement and Payment

Conditions set within the *Construction Materials Management* provision are incidental to the project for which no direct compensation will be made.

WASTE AND BORROW SOURCES:

(2-16-11) (Rev. 3-17-22)

Payment for temporary erosion control measures, except those made necessary by the Contractor's own negligence or for his own convenience, will be paid for at the appropriate contract unit price for the devices or measures utilized in borrow sources and waste areas.

No additional payment will be made for erosion control devices or permanent seeding and mulching in any commercial borrow or waste pit. All erosion and sediment control practices that may be required on a commercial borrow or waste site will be done at the Contractor's expense.

All offsite Staging Areas, Borrow and Waste sites shall be in accordance with "Borrow and Waste Site Reclamation Procedures for Contracted Projects" located at:

<https://connect.ncdot.gov/resources/roadside/FieldOperationsDocuments/Contract%20Reclamation%20Procedures.pdf>

All forms and documents referenced in the "Borrow and Waste Site Reclamation Procedures for Contracted Projects" shall be included with the reclamation plans for offsite staging areas, and borrow and waste sites.

TEMPORARY EARTH BERMS:

Description

This work consists of installing, maintaining, and removing any and all material required for the construction of temporary earth berms. The temporary earth berms shall be used to direct the flow of water to specific erosion control device(s), or to direct water flowing from offsite around/away from specific area(s) of construction.

Construction Methods

The Contractor shall install the temporary earth berms in accordance with the details in the plans and at locations indicated in the plans, and as directed. Upon installation, the earth berms shall be immediately stabilized as provided in Section 1620 of the *Standard Specifications*. Other stabilization methods may be utilized with prior approval from the Engineer.

Upon completion of the project, the temporary earth berms shall be removed. The earth material can be utilized in the filling of silt ditches and detention devices, or graded to match the existing contours and permanently seeded and mulched.

Measurement and Payment

The installation of the temporary earth berms will be paid for as *Borrow Excavation* as provided in Section 230 of the *Standard Specifications* or included in the lump sum price for grading.

Stabilization of the temporary earth berms will be paid for as *Temporary Seeding* as provided in Section 1620 of the *Standard Specifications*.

Such price and payment shall be considered full compensation for all work covered by this section including all materials, construction, maintenance, and removal of the temporary earth berms.

SAFETY FENCE AND JURISDICTIONAL FLAGGING:

Description

Safety Fence shall consist of furnishing materials, installing and maintaining polyethylene or polypropylene fence along the outside riparian buffer, wetland, or water boundary, or other boundaries located within the construction corridor to mark the areas that have been approved to infringe within the buffer, wetland, endangered vegetation, culturally sensitive areas or water. The fence shall be installed prior to any land disturbing activities.

Interior boundaries for jurisdictional areas noted above shall be delineated by stakes and highly visible flagging.

Jurisdictional boundaries at staging areas, waste sites, or borrow pits, whether considered outside or interior boundaries shall be delineated by stakes and highly visible flagging.

Materials

(A) Safety Fencing

Polyethylene or polypropylene fence shall be a highly visible preconstructed safety fence approved by the Engineer. The fence material shall have an ultraviolet coating.

Either wood posts or steel posts may be used. Wood posts shall be hardwood with a wedge or pencil tip at one end, and shall be at least 5 ft. in length with a minimum nominal 2" x 2" cross section. Steel posts shall be at least 5 ft. in length, and have a minimum weight of 0.85 lb/ft of length.

(B) Boundary Flagging

Wooden stakes shall be 4 feet in length with a minimum nominal 3/4" x 1-3/4" cross section. The flagging shall be at least 1" in width. The flagging material shall be vinyl and shall be orange in color and highly visible.

Construction Methods

No additional clearing and grubbing is anticipated for the installation of this fence. The fence shall be erected to conform to the general contour of the ground.

(A) Safety Fencing

Posts shall be set at a maximum spacing of 10 ft., maintained in a vertical position and hand set or set with a post driver. Posts shall be installed a minimum of 2 ft. into the ground. If hand set, all backfill material shall be thoroughly tamped. Wood posts may be sharpened to a dull point if power driven. Posts damaged by power driving shall be removed and replaced prior to final acceptance. The tops of all wood posts shall be cut at a 30-degree angle. The wood posts may, at the option of the Contractor, be cut at this angle either before or after the posts are erected.

The fence geotextile shall be attached to the wood posts with one 2" galvanized wire staple across each cable or to the steel posts with wire or other acceptable means.

Place construction stakes to establish the location of the safety fence in accordance with Article 105-9 or Article 801-1 of the *Standard Specifications*. No direct pay will be made for the staking of the safety fence. All stakeouts for safety fence shall be considered incidental to the work being paid for as "Construction Surveying", except that where there is no pay item for construction surveying, all safety fence stakeout will be performed by state forces.

The Contractor shall be required to maintain the safety fence in a satisfactory condition for the duration of the project as determined by the Engineer.

(B) Boundary Flagging

Boundary flagging delineation of interior boundaries shall consist of wooden stakes on 25 feet maximum intervals with highly visible orange flagging attached. Stakes shall be installed a minimum of 6" into the ground. Interior boundaries may be staked on a tangent that runs parallel

to buffer but must not encroach on the buffer at any location. Interior boundaries of hand clearing shall be identified with a different colored flagging to distinguish it from mechanized clearing.

Boundary flagging delineation of interior boundaries will be placed in accordance with Article 105-9 or Article 801-1 of the *Standard Specifications*. No direct pay will be made for delineation of the interior boundaries. This delineation will be considered incidental to the work being paid for as *Construction Surveying*, except that where there is no pay item or construction surveying the cost of boundary flagging delineation shall be included in the unit prices bid for the various items in the contract. Installation for delineation of all jurisdictional boundaries at staging areas, waste sites, or borrow pits shall consist of wooden stakes on 25 feet maximum intervals with highly visible orange flagging attached. Stakes shall be installed a minimum of 6" into the ground. Additional flagging may be placed on overhanging vegetation to enhance visibility but does not substitute for installation of stakes.

Installation of boundary flagging for delineation of all jurisdictional boundaries at staging areas, waste sites, or borrow pits shall be performed in accordance with Subarticle 230-4(B)(5) or Subarticle 802-2(F) of the *Standard Specifications*. No direct pay will be made for this delineation, as the cost of same shall be included in the unit prices bid for the various items in the contract.

The Contractor shall be required to maintain alternative stakes and highly visible flagging in a satisfactory condition for the duration of the project as determined by the Engineer.

Measurement and Payment

Safety Fence will be measured and paid as the actual number of linear feet of polyethylene or polypropylene fence installed in place and accepted. Such payment will be full compensation including but not limited to furnishing and installing fence geotextile with necessary posts and post bracing, staples, tie wires, tools, equipment and incidentals necessary to complete this work.

Payment will be made under:

Pay Item	Pay Unit
Safety Fence	Linear Foot

CONCRETE WASHOUT STRUCTURE:

(8-17-23)

Description

Concrete washout structures are enclosures above or below grade to contain concrete waste water and associated concrete mix from washing out ready-mix trucks, drums, pumps, or other equipment. Concrete washouts must collect and retain all the concrete washout water and solids, so that this material does not migrate to surface waters or into the ground water. These enclosures are not intended for concrete waste not associated with wash out operations.

The concrete washout structure may include constructed devices above or below ground and or commercially available devices designed specifically to capture concrete wash water.

Materials

Item	Section
Temporary Silt Fence	1605

Safety Fence shall meet the specifications as provided elsewhere in this contract.

Geomembrane basin liner shall meet the following minimum physical properties for low permeability; it shall consist of a polypropylene or polyethylene 10 mil thick geomembrane. If the minimum setback dimensions can be achieved the liner is not required. (5 feet above groundwater, 50 feet from top of bank of perennial stream, other surface water body, or wetland.)

Construction Methods

Build an enclosed earthen berm or excavate to form an enclosure in accordance with the details and as directed.

Install temporary silt fence around the perimeter of the enclosure in accordance with the details and as directed if structure is not located in an area where existing erosion and sedimentation control devices are capable to containing any loss of sediment.

Post a sign with the words "Concrete Washout" in close proximity of the concrete washout area, so it is clearly visible to site personnel. Install safety fence as directed for visibility to construction traffic.

Alternate details for accommodating concrete washout may be submitted for review and approval.

The alternate details shall include the method used to retain and dispose of the concrete waste water within the project limits and in accordance with the minimum setback requirements. (5 feet above groundwater, 50 feet from top of bank of perennial stream, other surface water body, or wetland.)

Maintenance and Removal

Maintain the concrete washout structure(s) to provide adequate holding capacity plus a minimum freeboard of 12 inches. Remove and dispose of hardened concrete and return the structure to a functional condition after reaching 75% capacity.

Inspect concrete washout structures for damage and maintain for effectiveness.

Remove the concrete washout structures and sign upon project completion. Grade the earth material to match the existing contours and permanently seed and mulch area.

Measurement and Payment

Concrete Washout Structure will be paid for per each enclosure installed in accordance with the details. If alternate details or commercially available devices are approved, then those devices will also be paid for per each approved and installed device.

Temporary Silt Fence will be measured and paid for in accordance with Article 1605-5 of the *Standard Specifications*.

Safety Fence shall be measured and paid for as provided elsewhere in this contract.

No measurement will be made for other items or for over excavation or stockpiling.

Payment will be made under:

Pay Item	Pay Unit
Concrete Washout Structure	Each

ADA COMPLIANT PEDESTRIAN TRAFFIC CONTROL DEVICES

(10/31/2017) (Rev. 6/3/2022)

Description

Furnish, install, and maintain all ADA compliant pedestrian traffic control devices for existing pedestrian facilities that are disrupted, closed, or relocated by planned work activities.

The ADA compliant pedestrian traffic control devices used to either close, redirect, divert or detour pedestrian traffic are Pedestrian Channelizing Devices.

Construction Methods

The ADA compliant pedestrian traffic control devices involved in the closing or redirecting of pedestrians as designated on the Transportation Management Plan (TMP) shall be manufactured and assembled in accordance with the requirements of the Americans with Disabilities Act (ADA) and be on the NCDOT approved products list.

Pedestrian Channelizing Devices shall be manufactured and assembled to be connected as to eliminate any gaps that allow pedestrians to stray from the channelizing path. Any Pedestrian Channelizing Devices used to close or block a pedestrian facility shall have a "SIDEWALK CLOSED" sign affixed to it and any audible warning devices, if designated on the TMP.

Measurement and Payment

Pedestrian Channelizing Devices will be measured and paid as the maximum number of linear feet of *Pedestrian Channelizing Devices* furnished, acceptably placed, and in use at any one time during the life of the project.

No direct payment will be made for any sign affixed to a pedestrian channelizing device. Signs mounted to pedestrian channelizing devices will be considered incidental to the device.

Relocation, replacement, repair, maintenance, or disposal of *Pedestrian Channelizing Devices* will be incidental to the pay item.

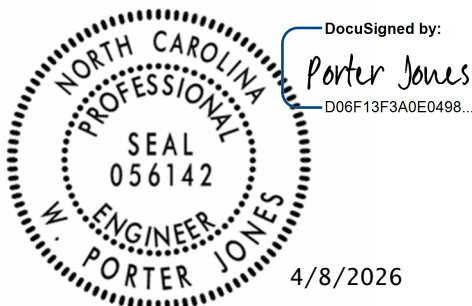
Payment will be made under:

Pay Item

Pedestrian Channelizing Devices

Pay Unit

Linear Foot



STANDARD SPECIAL PROVISIONS

AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS

(5-20-08) (Rev. 1-16-24)

Z-2

General Statute 143C-6-11. (h) Highway Appropriation is hereby incorporated verbatim in this contract as follows:

(h) Amounts Encumbered. – Transportation project appropriations may be encumbered in the amount of allotments made to the Department of Transportation by the Director for the estimated payments for transportation project contract work to be performed in the appropriation fiscal year. The allotments shall be multiyear allotments and shall be based on estimated revenues and shall be subject to the maximum contract authority contained in *General Statute 143C-6-11(c)*. Payment for transportation project work performed pursuant to contract in any fiscal year other than the current fiscal year is subject to appropriations by the General Assembly. Transportation project contracts shall contain a schedule of estimated completion progress, and any acceleration of this progress shall be subject to the approval of the Department of Transportation provided funds are available. The State reserves the right to terminate or suspend any transportation project contract, and any transportation project contract shall be so terminated or suspended if funds will not be available for payment of the work to be performed during that fiscal year pursuant to the contract. In the event of termination of any contract, the contractor shall be given a written notice of termination at least 60 days before completion of scheduled work for which funds are available. In the event of termination, the contractor shall be paid for the work already performed in accordance with the contract specifications.

Payment will be made on any contract terminated pursuant to the special provision in accordance with Subarticle 108-13(D) of the *Standard Specifications*.

NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY

(5-17-11)

Z-3

Seed shall be sampled and tested by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory. When said samples are collected, the vendor shall supply an independent laboratory report for each lot to be tested. Results from seed so sampled shall be final. Seed not meeting the specifications shall be rejected by the Department of Transportation and shall not be delivered to North Carolina Department of Transportation warehouses. If seed has been delivered it shall be available for pickup and replacement at the supplier's expense.

Any re-labeling required by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory, that would cause the label to reflect as otherwise specified herein shall be rejected by the North Carolina Department of Transportation.

Seed shall be free from seeds of the noxious weeds Johnsongrass, Balloonvine, Jimsonweed, Witchweed, Itchgrass, Serrated Tussock, Showy Crotalaria, Smooth Crotalaria, Sickpod, Sandbur, Wild Onion, and Wild Garlic. Seed shall not be labeled with the above weed species on the seed analysis label. Tolerances as applied by the Association of Official Seed Analysts will NOT be allowed for the above noxious weeds except for Wild Onion and Wild Garlic.

Tolerances established by the Association of Official Seed Analysts will generally be recognized. However, for the purpose of figuring pure live seed, the found pure seed and found germination

percentages as reported by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory will be used. Allowances, as established by the NCDOT, will be recognized for minimum pure live seed as listed on the following pages.

The specifications for restricted noxious weed seed refers to the number per pound as follows:

<u>Restricted Noxious Weed</u>	<u>Limitations per Lb. Of Seed</u>	<u>Restricted Noxious Weed</u>	<u>Limitations per Lb. of Seed</u>
Blessed Thistle	4 seeds	Cornflower (Ragged Robin)	27 seeds
Cocklebur	4 seeds	Texas Panicum	27 seeds
Spurred Anoda	4 seeds	Bracted Plantain	54 seeds
Velvetleaf	4 seeds	Buckhorn Plantain	54 seeds
Morning-glory	8 seeds	Broadleaf Dock	54 seeds
Corn Cockle	10 seeds	Curly Dock	54 seeds
Wild Radish	12 seeds	Dodder	54 seeds
Purple Nutsedge	27 seeds	Giant Foxtail	54 seeds
Yellow Nutsedge	27 seeds	Horsenettle	54 seeds
Canada Thistle	27 seeds	Quackgrass	54 seeds
Field Bindweed	27 seeds	Wild Mustard	54 seeds
Hedge Bindweed	27 seeds		

Seed of Pensacola Bahiagrass shall not contain more than 7% inert matter, Kentucky Bluegrass, Centipede and Fine or Hard Fescue shall not contain more than 5% inert matter whereas a maximum of 2% inert matter will be allowed on all other kinds of seed. In addition, all seed shall not contain more than 2% other crop seed nor more than 1% total weed seed. The germination rate as tested by the North Carolina Department of Agriculture shall not fall below 70%, which includes both dormant and hard seed. Seed shall be labeled with not more than 7%, 5% or 2% inert matter (according to above specifications), 2% other crop seed and 1% total weed seed.

Exceptions may be made for minimum pure live seed allowances when cases of seed variety shortages are verified. Pure live seed percentages will be applied in a verified shortage situation. Those purchase orders of deficient seed lots will be credited with the percentage that the seed is deficient.

FURTHER SPECIFICATIONS FOR EACH SEED GROUP ARE GIVEN BELOW:

Minimum 85% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 83% pure live seed will not be approved.

Sericea Lespedeza
Oats (seeds)

Minimum 80% pure live seed; maximum 1% total weed seed; maximum 2% total other crop; maximum 144 restricted noxious weed seed per pound. Seed less than 78% pure live seed will not be approved.

Tall Fescue (all approved varieties)
Kobe Lespedeza

Bermudagrass
Browntop Millet

Korean Lespedeza
Weeping Lovegrass
Carpetgrass

German Millet – Strain R
Clover – Red/White/Crimson

Minimum 78% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 76% pure live seed will not be approved.

Common or Sweet Sundangrass

Minimum 76% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 74% pure live seed will not be approved.

Rye (grain; all varieties)
Kentucky Bluegrass (all approved varieties)
Hard Fescue (all approved varieties)
Shrub (bicolor) Lespedeza

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 noxious weed seed per pound. Seed less than 70% pure live seed will not be approved.

Centipedegrass
Crownvetch
Pensacola Bahiagrass
Creeping Red Fescue

Japanese Millet
Reed Canary Grass
Zoysia

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 5% inert matter; maximum 144 restricted noxious weed seed per pound.

Barnyard Grass
Big Bluestem
Little Bluestem
Bristly Locust
Birdsfoot Trefoil
Indiangrass
Orchardgrass
Switchgrass
Yellow Blossom Sweet Clover

ERRATA

(01-16-24)

Z-4

Revise the *2024 Standard Specifications* as follows:

Division 3

Page 3-5, Article 305-2 MATERIALS, after line 16, replace " 1032-3(A)(7)" with "1032-3" and add the item "Galvanized Corrugated Steel Pipe" with Section "1032-3".

Page 3-6, Article 310-2 MATERIALS, after line 9, add the item “Galvanized Corrugated Steel Pipe” with Section “1032-3”.

Division 9

Page 9-17, Article 904-4 MEASUREMENT AND PAYMENT, prior to line 1, replace " Sign Erection, Relocate Type (Ground Mounted)” with “Sign Erection, Relocate Type ____ (Ground Mounted)”.

Division 10

Page 10-51, Article 1024-4 WATER, prior to line 1, delete the “unpopulated blank row” in Table 1024-2 between “Time of set, deviation from control” and “Chloride Ion Content, Max.”.

Page 10-170, Subarticle 1081-1(C) Requirements, line 4, replace "maximum” with “minimum”.

Division 11

Page 11-15, Article 1160-4 MEASUREMENT AND PAYMENT, line 24, replace “Where barrier units are moved more than one” with “Where barrier units are moved more than once”.

Division 15

Page 15-10, Article 1515-4 MEASUREMENT AND PAYMENT, lines 11, replace " All piping” with “All labor, the manhole, other materials, excavation, backfilling, piping”.

Division 16

Page 16-14, Article 1633-5 MEASUREMENT AND PAYMENT, line 20-24 and prior to line 25, delete and replace with the following " *Flocculant* will be measured and paid in accordance with Article 1642-5 applied to the temporary rock silt checks.”

Page 16-3, Article 1609-2 MATERIALS, after line 26, replace "Type 4” with “Type 4a”.

Page 16-25, Article 1644-2 MATERIALS, after line 22, replace "Type 4” with “Type 4a”.

PLANT AND PEST QUARANTINES

(Imported Fire Ant, Gypsy Moth, Witchweed, Emerald Ash Borer, Guava Root Knot Nematode, And Other Noxious Weeds)

(3-18-03) (Rev. 5-21-19)

Z-04a

Within Quarantined Area

This project may be within a county regulated for plant and/or pests. If the project or any part of the Contractor's operations is located within a quarantined area, thoroughly clean all equipment prior to moving out of the quarantined area. Comply with federal/state regulations by obtaining a certificate or limited permit for any regulated article moving from the quarantined area.

Originating in a Quarantined County

Obtain a certificate or limited permit issued by the N.C. Department of Agriculture/United States Department of Agriculture. Have the certificate or limited permit accompany the article when it arrives at the project site.

Contact

Contact the N.C. Department of Agriculture/United States Department of Agriculture at 1-800-206-9333, 919-707-3730, or <https://www.ncagr.gov/plantindustry/Plant/quaran/table2.htm> to determine those specific project sites located in the quarantined area or for any regulated article used on this project originating in a quarantined county.

Regulated Articles Include

1. Soil, sand, gravel, compost, peat, humus, muck, and decomposed manure, separately or with other articles. This includes movement of articles listed above that may be associated with cut/waste, ditch pulling, and shoulder cutting.
2. Plants with roots including grass sod.
3. Plant crowns and roots.
4. Bulbs, corms, rhizomes, and tubers of ornamental plants.
5. Hay, straw, fodder, and plant litter of any kind.
6. Clearing and grubbing debris.
7. Used agricultural cultivating and harvesting equipment.
8. Used earth-moving equipment.
9. Any other products, articles, or means of conveyance, of any character, if determined by an inspector to present a hazard of spreading imported fire ant, gypsy moth, witchweed, emerald ash borer, guava root knot nematode, or other noxious weeds.

TITLE VI AND NONDISCRIMINATION:

(6-28-77)(Rev 1/16//2024)

Z-6

The North Carolina Department of Transportation is committed to carrying out the U.S. Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts.

The provisions of this section related to United States Department of Transportation (US DOT) Order 1050.2A, Title 49 Code of Federal Regulations (CFR) part 21, 23 United States Code (U.S.C.) 140 and 23 CFR part 200 (or 49 CFR 303, 49 U.S.C. 5332 or 49 U.S.C. 47123) are applicable to all North Carolina Department of Transportation (NCDOT) contracts and to all related subcontracts, material supply, engineering, architectural and other service contracts, regardless of dollar amount. Any Federal provision that is specifically required not specifically set forth is hereby incorporated by reference.

(1) Title VI Assurances (USDOT Order 1050.2A, Appendix A)

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(a) Compliance with Regulations

The contractor (hereinafter includes consultants) shall comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

(b) Nondiscrimination

The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

(c) Solicitations for Subcontractors, Including Procurements of Materials and Equipment

In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

(d) Information and Reports

The contractor shall provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor shall so certify to the Recipient or the FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.

(e) Sanctions for Noncompliance:

In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it and/or the FHWA may determine to be appropriate, including, but not limited to:

- (i) Withholding payments to the contractor under the contract until the contractor complies; and/or
 - (ii) Cancelling, terminating, or suspending a contract, in whole or in part.
- (f) Incorporation of Provisions

The contractor shall include the provisions of paragraphs (a) through (f) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor shall take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

(2) Title VI Nondiscrimination Program (23 CFR 200.5(p))

The North Carolina Department of Transportation (NCDOT) has assured the USDOT that, as a condition to receiving federal financial assistance, NCDOT will comply with Title VI of the Civil Rights Act of 1964 and all requirements imposed by Title 49 CFR part 21 and related nondiscrimination authorities to ensure that no person shall, on the ground of race, color, national origin, limited English proficiency, sex, age, or disability (including religion/creed or income-level, where applicable), be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any programs, activities, or services conducted or funded by NCDOT. Contractors and other organizations under contract or agreement with NCDOT must also comply with Title VI and related authorities, therefore:

- (a) During the performance of this contract or agreement, contractors (e.g., subcontractors, consultants, vendors, prime contractors) are responsible for complying with NCDOT's Title VI Program. Contractors are not required to prepare or submit Title VI Programs. To comply with this section, the prime contractor shall:
1. Post NCDOT's Notice of Nondiscrimination and the Contractor's own Equal Employment Opportunity (EEO) Policy in conspicuous locations accessible to all employees, applicants and subcontractors on the jobsite.
 2. Physically incorporate the required Title VI clauses into all subcontracts on federally-assisted and state-funded NCDOT projects, and ensure inclusion by subcontractors into all lower-tier subcontracts.
 3. Required Solicitation Language. The Contractor shall include the following notification in all solicitations for bids and requests for work or material, regardless of funding source:

“The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will

affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award. In accordance with other related nondiscrimination authorities, bidders and contractors will also not be discriminated against on the grounds of sex, age, disability, low-income level, creed/religion, or limited English proficiency in consideration for an award.”

4. Physically incorporate the FHWA-1273, in its entirety, into all subcontracts and subsequent lower tier subcontracts on Federal-aid highway construction contracts only.
 5. Provide language assistance services (i.e., written translation and oral interpretation), free of charge, to LEP employees and applicants. Contact NCDOT OCR for further assistance, if needed.
 6. For assistance with these Title VI requirements, contact the NCDOT Title VI Nondiscrimination Program at 1-800-522-0453.
- (b) Subrecipients (e.g. cities, counties, LGAs, planning organizations) may be required to prepare and submit a Title VI Plan to NCDOT, including Title VI Assurances and/or agreements. Subrecipients must also ensure compliance by their contractors and subrecipients with Title VI. (23 CFR 200.9(b)(7))
- (c) If reviewed or investigated by NCDOT, the contractor or subrecipient agrees to take affirmative action to correct any deficiencies found within a reasonable time period, not to exceed 90 calendar days, unless additional time is granted by NCDOT. (23 CFR 200.9(b)(15))
- (d) The Contractor is responsible for notifying subcontractors of NCDOT’s External Discrimination Complaints Process.

1. Applicability

Title VI and related laws protect participants and beneficiaries (e.g., members of the public and contractors) from discrimination by NCDOT employees, subrecipients and contractors, regardless of funding source.

2. Eligibility

Any person—or class of persons—who believes he/she has been subjected to discrimination based on race, color, national origin, Limited English Proficiency (LEP), sex, age, or disability (and religion in the context of employment, aviation, or transit) may file a written complaint. The law also prohibits intimidation or retaliation of any sort.

3. Time Limits and Filing Options

Complaints may be filed by the affected individual(s) or a representative and must be filed no later than 180 calendar days after the following:

- (i) The date of the alleged act of discrimination; or
- (ii) The date when the person(s) became aware of the alleged discrimination; or
- (iii) Where there has been a continuing course of conduct, the date on which that conduct was discontinued or the latest instance of the conduct.

Title VI and related discrimination complaints may be submitted to the following entities:

- North Carolina Department of Transportation, Office of Civil Rights, Title VI Program, 1511 Mail Service Center, Raleigh, NC 27699-1511; toll free 1-800-522-0453
- Federal Highway Administration, North Carolina Division Office, 310 New Bern Avenue, Suite 410, Raleigh, NC 27601, 919-747-7010
- US Department of Transportation, Departmental Office of Civil Rights, External Civil Rights Programs Division, 1200 New Jersey Avenue, SE, Washington, DC 20590; 202-366-4070

4. Format for Complaints

Complaints must be in writing and signed by the complainant(s) or a representative, and include the complainant's name, address, and telephone number. Complaints received by fax or e-mail will be acknowledged and processed. Allegations received by telephone will be reduced to writing and provided to the complainant for confirmation or revision before processing. Complaints will be accepted in other languages, including Braille.

5. Discrimination Complaint Form

Contact NCDOT Civil Rights to receive a full copy of the Discrimination Complaint Form and procedures.

6. Complaint Basis

Allegations must be based on issues involving race, color, national origin (LEP), sex, age, disability, or religion (in the context of employment, aviation or transit). "Basis" refers to the complainant's membership in a protected group category.

TABLE 103-1 COMPLAINT BASIS			
Protected Categories	Definition	Examples	Applicable Nondiscrimination Authorities
Race and Ethnicity	An individual belonging to one of the accepted racial groups; or the perception, based usually on physical characteristics that a person is a member of a racial group	Black/African American, Hispanic/Latino, Asian, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, White	Title VI of the Civil Rights Act of 1964; 49 CFR Part 21; 23 CFR 200; 49 U.S.C. 5332(b); 49 U.S.C. 47123. <i>(Executive Order 13166)</i>
Color	Color of skin, including shade of skin within a racial group	Black, White, brown, yellow, etc.	
National Origin <i>(Limited English Proficiency)</i>	Place of birth. Citizenship is not a factor. <i>(Discrimination based on language or a person's accent is also covered)</i>	Mexican, Cuban, Japanese, Vietnamese, Chinese	
Sex	Gender. The sex of an individual. <i>Note: Sex under this program does not include sexual orientation.</i>	Women and Men	1973 Federal-Aid Highway Act; 49 U.S.C. 5332(b); 49 U.S.C. 47123.
Age	Persons of any age	21-year-old person	Age Discrimination Act of 1975

			49 U.S.C. 5332(b); 49 U.S.C. 47123.
Disability	Physical or mental impairment, permanent or temporary, or perceived.	Blind, alcoholic, para-amputee, epileptic, diabetic, arthritic	Section 504 of the Rehabilitation Act of 1973; Americans with Disabilities Act of 1990
Religion (in the context of employment) <i>(Religion/ Creed in all aspects of any aviation or transit-related construction)</i>	An individual belonging to a religious group; or the perception, based on distinguishable characteristics that a person is a member of a religious group. In practice, actions taken as a result of the moral and ethical beliefs as to what is right and wrong, which are sincerely held with the strength of traditional religious views. Note: Does not have to be associated with a recognized religious group or church; if an individual sincerely holds to the belief, it is a protected religious practice.	Muslim, Christian, Sikh, Hindu, etc.	Title VII of the Civil Rights Act of 1964; 23 CFR 230; FHWA-1273 Required Contract Provisions. <i>(49 U.S.C. 5332(b); 49 U.S.C. 47123)</i>

(3) Pertinent Nondiscrimination Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest agrees to comply with the following non-discrimination statutes and authorities, including, but not limited to:

- (a) Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- (b) The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- (c) Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- (d) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability) and 49 CFR Part 27;
- (e) The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- (f) Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- (g) The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- (h) Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities

(42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;

- (i) The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- (j) Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- (k) Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- (l) Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).
- (m) Title VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000e et seq., Pub. L. 88-352), (prohibits employment discrimination on the basis of race, color, religion, sex, or national origin).

(4) Additional Title VI Assurances

***The following Title VI Assurances (Appendices B, C and D) shall apply, as applicable*

(a) Clauses for Deeds Transferring United States Property (1050.2A, Appendix B)

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4.

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the North Carolina Department of Transportation (NCDOT) will accept title to the lands and maintain the project constructed thereon in accordance with the North Carolina General Assembly, the Regulations for the Administration of the Federal-Aid Highway Program, and the policies and procedures prescribed by the Federal Highway Administration of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the NCDOT all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto the North Carolina Department of Transportation (NCDOT) and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the NCDOT, its successors and assigns.

The NCDOT, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the NCDOT will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended [, and (3) that in the event of breach of any of the above-mentioned nondiscrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

(b) Clauses for Transfer of Real Property Acquired or Improved Under the Activity, Facility, or Program (1050.2A, Appendix C)

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the North Carolina Department of Transportation (NCDOT) pursuant to the provisions of Assurance 7(a):

1. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
 - (i.) In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.

2. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued. *
3. With respect to a deed, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the NCDOT and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

(c) Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program (1050.2A, Appendix D)

The following clauses will be included in deeds, licenses, permits, or similar instruments/ agreements entered into by the North Carolina Department of Transportation (NCDOT) pursuant to the provisions of Assurance 7(b):

1. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
2. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non- discrimination covenants, the NCDOT will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued. *
3. With respect to deeds, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will there upon revert to and vest in and become the absolute property of the NCDOT and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

MINORITY AND FEMALE EMPLOYMENT REQUIREMENTS

Z-7

NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (*EXECUTIVE NUMBER 11246*)

1. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, see as shown on the attached sheet entitled "Employment Goals for Minority and Female participation".

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in *41 CFR Part 60-4* shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in *41 CFR 60-4.3(a)*, and its effort to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the executive Order and the regulations in *41 CFR Part 60-4*. Compliance with the goals will be measured against the total work hours performed.

2. As used in this Notice and in the contract resulting from this solicitation, the "covered area" is the county or counties shown on the cover sheet of the proposal form and contract.

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants /

Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:

The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act ([29 CFR part 3](#))), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHDLegacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in [29 CFR part 3](#); and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH-347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access (1) Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices (1) Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS** (23 CFR 633, Subpart B, Appendix B)
This provision is applicable to all Federal-aid projects funded
under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

ON-THE-JOB TRAINING

(10-16-07) (Rev. 4-21-15)

Z-10

Description

The North Carolina Department of Transportation will administer a custom version of the Federal On-the-Job Training (OJT) Program, commonly referred to as the Alternate OJT Program. All contractors (existing and newcomers) will be automatically placed in the Alternate Program. Standard OJT requirements typically associated with individual projects will no longer be applied at the project level. Instead, these requirements will be applicable on an annual basis for each contractor administered by the OJT Program Manager.

On the Job Training shall meet the requirements of 23 CFR 230.107 (b), 23 USC – Section 140, this provision and the On-the-Job Training Program Manual.

The Alternate OJT Program will allow a contractor to train employees on Federal, State and privately funded projects located in North Carolina. However, priority shall be given to training employees on NCDOT Federal-Aid funded projects.

Minorities and Women

Developing, training and upgrading of minorities and women toward journeyman level status is a primary objective of this special training provision. Accordingly, the Contractor shall make every effort to enroll minority and women as trainees to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

Assigning Training Goals

The Department, through the OJT Program Manager, will assign training goals for a calendar year based on the contractors' past three years' activity and the contractors' anticipated upcoming year's activity with the Department. At the beginning of each year, all contractors eligible will be contacted by the Department to determine the number of trainees that will be assigned for the upcoming calendar year. At that time the Contractor shall enter into an agreement with the Department to provide a self-imposed on-the-job training program for the calendar year. This agreement will include a specific number of annual training goals agreed to by both parties. The number of training assignments may range from 1 to 15 per contractor per calendar year. The Contractor shall sign an agreement to fulfill their annual goal for the year.\

Training Classifications

The Contractor shall provide on-the-job training aimed at developing full journeyman level workers in the construction craft/operator positions. Preference shall be given to providing training in the following skilled work classifications:

Equipment Operators	Office Engineers
Truck Drivers	Estimators
Carpenters	Iron / Reinforcing Steel Workers
Concrete Finishers	Mechanics
Pipe Layers	Welders

The Department has established common training classifications and their respective training requirements that may be used by the contractors. However, the classifications established are not all-inclusive. Where the training is oriented toward construction applications, training will be allowed in lower-level management positions such as office engineers and estimators. Contractors shall submit new classifications for specific job functions that their employees are performing. The Department will review and recommend for acceptance to FHWA the new classifications proposed by contractors, if applicable. New classifications shall meet the following requirements:

Proposed training classifications are reasonable and realistic based on the job skill classification needs, and

The number of training hours specified in the training classification is consistent with common practices and provides enough time for the trainee to obtain journeyman level status.

The Contractor may allow trainees to be trained by a subcontractor provided that the Contractor retains primary responsibility for meeting the training and this provision is made applicable to the subcontract. However, only the Contractor will receive credit towards the annual goal for the trainee.

Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journeyman level status or in which they have been employed as a journeyman.

Records and Reports

The Contractor shall maintain enrollment, monthly and completion reports documenting company compliance under these contract documents. These documents and any other information as requested shall be submitted to the OJT Program Manager.

Upon completion and graduation of the program, the Contractor shall provide each trainee with a certification Certificate showing the type and length of training satisfactorily completed.

Trainee Interviews

All trainees enrolled in the program will receive an initial and Trainee/Post graduate interview conducted by the OJT program staff.

Trainee Wages

Contractors shall compensate trainees on a graduating pay scale based upon a percentage of the prevailing minimum journeyman wages (Davis-Bacon Act). Minimum pay shall be as follows:

60 percent	of the journeyman wage for the first half of the training period
75 percent	of the journeyman wage for the third quarter of the training period
90 percent	of the journeyman wage for the last quarter of the training period

In no instance shall a trainee be paid less than the local minimum wage. The Contractor shall adhere to the minimum hourly wage rate that will satisfy both the NC Department of Labor (NCDOL) and the Department.

Achieving or Failing to Meet Training Goals

The Contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and who receives training for at least 50 percent of the specific program requirement. Trainees will be allowed to be transferred between projects if required by the Contractor's scheduled workload to meet training goals.

If a contractor fails to attain their training assignments for the calendar year, they may be taken off the NCDOT's Bidders List.

Measurement and Payment

No compensation will be made for providing required training in accordance with these contract documents.

STANDARD SPECIAL PROVISION
MINIMUM WAGES
GENERAL DECISION NC20260090 01/02/2026 NC90

Z-090

Date: January 2, 2026

General Decision Number: NC20260090 01/02/2026 NC90

Superseded General Decision Numbers: NC20250090

State: North Carolina

Construction Type: HIGHWAY

COUNTIES:

Brunswick	Greene	Onslow
Cumberland	Hoke	Pender
Currituck	Johnston	Pitt
Edgecombe	Nash	Wake
Franklin	New Hanover	Wayne

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Modification Number
0

Publication Date
01/02/2026

SUNC2014-005 11/17/2014

	Rates	Fringes
BLASTER	21.04	
CARPENTER	13.72	
CEMENT MASON/CONCRETE FINISHER	14.48	
ELECTRICIAN		
Electrician	17.97	
Telecommunications Technician	16.79	.63
IRONWORKER	16.02	
LABORER		
Asphalt Raker and Spreader	12.46	
Asphalt Screed/Jackman	14.33	
Carpenter Tender	12.88	
Cement Mason/Concrete Finisher Tender	12.54	
Common or General	10.20	
Guardrail/Fence Installer	12.87	
Pipelayer	12.17	
Traffic Signal/Lighting Installer	14.89	
PAINTER		
Bridge	24.57	
POWER EQUIPMENT OPERATORS		
Asphalt Broom Tractor	11.85	
Bulldozer Fine	17.04	

	Rates	Fringes
Bulldozer Rough	14.34	
Concrete Grinder/Groover	20.34	2.30
Crane Boom Trucks	20.54	
Crane Other	20.08	
Crane Rough/All-Terrain	20.67	
Drill Operator Rock	14.38	
Drill Operator Structure	21.14	
Excavator Fine	16.60	
Excavator Rough	14.00	
Grader/Blade Fine	18.47	
Grader/Blade Rough	14.62	
Loader 2 Cubic Yards or Less	13.76	
Loader Greater Than 2 Cubic Yards	14.14	
Material Transfer Vehicle (Shuttle Buggy)	15.18	
Mechanic	17.55	
Milling Machine	15.36	
Off-Road Hauler/Water Tanker	11.36	
Oiler/Greaser	13.55	
Pavement Marking Equipment	12.11	
Paver Asphalt	15.59	
Paver Concrete	18.20	
Roller Asphalt Breakdown	12.45	
Roller Asphalt Finish	13.85	
Roller Other	11.36	
Scraper Finish	12.71	
Scraper Rough	11.35	
Slip Form Machine	16.50	
Tack Truck/Distributor Operator	14.52	
TRUCK DRIVER		
GVWR of 26,000 Lbs or Less	11.12	
GVWR of 26,001 Lbs or Greater	12.37	

Welders – Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to

contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", "SA", or "SC" denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The "SU" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing

rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

"SU" wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The "SA" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R. 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the "SA" identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

- 1) Has there been an initial decision in the matter? This can be:
 - a) a survey underlying a wage determination
 - b) an existing published wage determination
 - c) an initial WHD letter setting forth a position on a wage determination matter
 - d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

- 2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and

Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via mail to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

- 3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

END OF GENERAL DECISION

PROJECT SPECIAL PROVISION

(10-18-95) (Rev. 9-19-13)

Z-1

PERMITS

The Contractor's attention is directed to the following permits, which have been issued to the Department of Transportation by the authority granting the permit.

<u>PERMIT</u>	<u>AUTHORITY GRANTING THE PERMIT</u>
Water Quality (401)	Department of Environmental Quality, Division of Energy, Mineral, and Land Resources
Construction General Permit NCG010000	Department of Environmental Quality, Division of Energy, Mineral, and Land Resources

The Contractor shall comply with all applicable permit conditions during construction of this project.

Agents of the permitting authority will periodically inspect the project for adherence to the permits.

The Contractor's attention is also directed to Articles 107-10 and 107-13 of the *Standard Specifications* and the following:

Should the Contractor propose to utilize construction methods (such as temporary structures or fill in waters and/or wetlands for haul roads, work platforms, cofferdams, etc.) not specifically identified in the permit (individual, general, or nationwide) authorizing the project it shall be the Contractor's responsibility to coordinate with the Engineer to determine what, if any, additional permit action is required. The Contractor shall also be responsible for initiating the request for the authorization of such construction method by the permitting agency. The request shall be submitted through the Engineer. The Contractor shall not utilize the construction method until it is approved by the permitting agency. The request normally takes approximately 60 days to process; however, no extensions of time or additional compensation will be granted for delays resulting from the Contractor's request for approval of construction methods not specifically identified in the permit.

Where construction moratoriums are contained in a permit condition which restricts the Contractor's activities to certain times of the year, those moratoriums will apply only to the portions of the work taking place in the restricted waters, wetlands or buffer zones, provided that activities outside those areas is done in such a manner as to not affect the restricted waters, wetlands or buffer zones.

TOWN OF HOLLY SPRINGS

PROJECT NO. 22-007

TIP No. BL-0052

PROJECT NAME: N. Main Street

Sidewalk Connector

DATE OF ADVERTISING: _____

DATE OF BID OPENING: _____

NAME OF BIDDER: _____

ADDRESS: _____

NC. LICENSE NO.: _____

BID DEPOSIT 5%: _____

TOTAL BID: _____

CONTRACTOR SIGNATURE: _____

**EXECUTION OF BID
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION**

CORPORATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

Full name of Corporation

Address as Prequalified

Attest _____

Secretary/Assistant Secretary
Select appropriate title

By _____

President/Vice President/Assistant Vice President
Select appropriate title

Print or type Signer's name

Print or type Signer's name

CORPORATE SEAL

AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

_____ day of _____ 20__.

NOTARY SEAL

Signature of Notary Public

of _____ County

State of _____

My Commission Expires: _____

EXECUTION OF BID
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION
PARTNERSHIP

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

Full Name of Partnership

Address as Prequalified

By _____

Signature of Witness

Signature of Partner

Print or type Signer's name

Print or type Signer's name

AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

NOTARY SEAL

_____ day of _____ 20__.

Signature of Notary Public

of _____ County

State of _____

My Commission Expires: _____

**EXECUTION OF BID
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION
LIMITED LIABILITY COMPANY**

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

Full Name of Firm

Address as Prequalified

Signature of Witness

Signature of Member/Manager/Authorized Agent
Select appropriate title

Print or type Signer's name

Print or type Signer's Name

AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

NOTARY SEAL

_____ day of _____ 20__.

Signature of Notary Public

of _____ County

State of _____

My Commission Expires: _____

**EXECUTION OF BID
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN
CERTIFICATION**

JOINT VENTURE (2) or (3)

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

Instructions: **2 Joint Venturers** Fill in lines (1), (2) and (3) and execute. **3 Joint Venturers** Fill in lines (1), (2), (3) and (4) and execute. On Line (1), fill in the name of the Joint Venture Company. On Line (2), fill in the name of one of the joint venturers and execute below in the appropriate manner. On Line (3), print or type the name of the other joint venturer and execute below in the appropriate manner. On Line (4), fill in the name of the third joint venturer, if applicable and execute below in the appropriate manner.

(1) _____
Name of Joint Venture

(2) _____
Name of Contractor

Address as Prequalified

Signature of Witness or Attest	By	Signature of Contractor
Print or type Signer's name		Print or type Signer's name

If Corporation, affix Corporate Seal And

(3) _____
Name of Contractor

Address as Prequalified

Signature of Witness or Attest	By	Signature of Contractor
Print or type Signer's name		Print or type Signer's name

If Corporation, affix Corporate Seal and

(4) _____
Name of Contractor (for 3 Joint Venture only)

Address as Prequalified

Signature of Witness or Attest	By	Signature of Contractor
Print or type Signer's name		Print or type Signer's name

If Corporation, affix Corporate Seal

NOTARY SEAL

Affidavit must be notarized for Line (2)

Subscribed and sworn to before me this
day of 20

Signature of Notary Public
of _____ County
State of _____
My Commission Expires: _____

NOTARY SEAL

Affidavit must be notarized for Line (3)

Subscribed and sworn to before me this
day of 20

Signature of Notary Public
of _____ County
State of _____
My Commission Expires: _____

NOTARY SEAL

Affidavit must be notarized for Line (4)

Subscribed and sworn to before me this
day of 20

Signature of Notary Public _____
of _____ County
State of _____
My Commission Expires: _____

EXECUTION OF BID
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

Name of Contractor _____

Individual name

Trading and doing business as _____

Full name of Firm

Address as Prequalified

Signature of Witness

Signature of Contractor, Individually

Print or type Signer's name

Print or type Signer's name

AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the _____

NOTARY SEAL

_____ day of _____ 20__.

Signature of Notary Public

of _____ County

State of _____

My Commission Expires: _____

Contract No. _____

Rev. 11-1-12

County _____

M-4

EXECUTION OF BID
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION
INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

Name of Contractor _____
Print or type Individual name

Address as Prequalified

Signature of Contractor, Individually

Print or type Signer's Name

Signature of Witness

Print or type Signer's name

AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the _____
_____ day of _____ 20__.

NOTARY SEAL

Signature of Notary Public

of _____ County

State of _____

My Commission Expires: _____

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Municipality if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation filed with the Municipality, or has become erroneous because of changed circumstances.
2. The terms *covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded*, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Municipality project representative.
3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in Municipal contracts, unless authorized by the Municipality.
4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR 1273)* provided by the Municipality, without subsequent modification, in all lower tier covered transactions.
5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.
6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
7. Except as authorized in paragraph 6 herein, the Municipality may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and
- d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

☐

Check here if an explanation is attached to this certification.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR

CONTRACT:

NAME OF BIDDER:

The undersigned intends to perform work in connection with the above contract upon execution of the bid and subsequent award of contract by the Board of Transportation as:

Name of MBE/WBE/DBE Subcontractor _____

Address _____

City _____ State _____ Zip _____

Please check all that apply:

Minority Business Enterprise (MBE) _____

Women Business Enterprise (WBE) _____

Disadvantaged Business Enterprise (DBE) _____

The MBE /WBE /DBE status of the above named subcontractor is certified by the North Carolina Department of Transportation. The above named subcontractor is prepared to perform the described work listed on the attached MBE/WBE/DBE Commitment Items sheet, in connection with the above contract upon execution of the bid and subsequent award of contract by the Board of Transportation. The above named subcontractor is prepared to perform the described work at the estimated Commitment Total for Subcontractor Price identified on the MBE/WBE/DBE Commitment Items sheet and amount indicated below.

Commitment Total based on estimated Unit Prices and Quantities on the "attached" MBE/WBE/DBE Commitment Items sheet. Amount \$ _____

The above named bidder and subcontractor mutually accepts the Commitment Total estimated for the Unit Prices and Quantities. This commitment total is based on estimated quantities only and most likely will vary up or down as the project is completed. Final compensation will be based on actual quantities of work performed and accepted during the pursuance of work. The above listed amount represents the entire dollar amount quoted based on these estimated quantities. No conversations, verbal agreements, and/or other forms of non-written representations shall serve to add, delete, or modify the terms as stated. This document shall not serve in any manner as an actual subcontract between the two parties. A separate subcontractor agreement will describe in detail the contractual obligations of the bidder and the MBE/WBE/DBE subcontractor.

Affirmation

The above named MBE/ WBE/ DBE subcontractor affirms that it will perform the portion(s) of the contract for the estimated dollar value as stated above.

Name of MBE/ WBE/ DBE Subcontractor

Name of Bidder

Signature / Title

Signature / Title

Date

Date

State of North Carolina
Department of Transportation
Subcontractor Payment Information

Submit with Invoice To: Invoice
Coordinator
North Carolina Department of Transportation
Division /
Branch
Address
Raleigh, NC XXXXX-XXXX

Firm Invoice No.
Reference
NCDOT PO / Contract
Number
WBS No. (State Project
No.)
Date of Invoice
Signed

Invoice Line Item Referen ce	Payer Name	Payer Federal Tax Id	Subcontract or /Subconsulta nt/ Material Supplier Name	Subcontract or /Subconsult ant / Material Supplier Federal Tax Id	Amount Paid To Subcontractor / Subconsultant / Material Supplier This Invoice	Date Paid To Subcontractor / Subconsultan t / Material Supplier This Invoice
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

Total Amount Paid to Subcontractor Firms \$ _____

NOTE: - These documents are scanned into our Fiscal program. Please do not highlight or shade the figures.

I certify that this information accurately reflects actual payments made and the dates the payments were made to Subcontractors/
Subconsultants/Material Suppliers on the above referenced project.

Signature _____ Title _____

PROCEDURE FOR REPORTING NORTH CAROLINA SALES TAX

SALES TAX EXPENDITURES ON TOWN OF HOLLY SPRINGS CONTRACTS

1. The following procedure in handling the North Carolina Sales Tax is applicable to this project. Contractors shall comply fully with the requirements outlined hereinafter, in order that the owner may recover the amount of the tax permitted under the law.

2. (a) It shall be the general contractor's responsibility to furnish the owner documentary evidence showing the materials used and sales tax paid by the general contractor and each of his subcontractors. Any county sales tax included in the contractor's statements must be shown separately from the state sales tax. If more than one county is shown, each county shall be listed separately.

(b) The documentary evidence shall consist of a certified statement, by the general contractor and each of his subcontractors individually, showing total purchases of materials from each separate vendor and total sales taxes by each county paid each vendor. The certified statement must show the invoice number(s) covered and inclusive dates of such invoices. State sales tax shall be listed separately from county sales tax. If more than one county is shown, each county shall be listed separately.

(c) Materials used from general contractor's or subcontractor's warehouse stock shall be shown in a certified statement at warehouse stock prices.

(d) The general contractor shall not be required to certify the subcontractor's statements.

(e) The documentary evidence to be furnished to owners eligible for sales or use tax refunds covers sales and/or use taxes paid on building materials used by contractors and subcontractors in the performance of contracts with churches, orphanages, hospitals not operated for profit, educational institutions not operated for profit, and other charitable or religious institutions or organizations not operated for profit and incorporated cities, towns, and counties in this State. The documentary evidence is to be submitted to the above-named institutions, organizations, and governmental units to be included in claims for refunds to be prepared and submitted by them to obtain refunds provided by G.S. 105-164.14 and is to include the purchases of building materials, supplies, fixtures, and equipment which become a part of or annexed to buildings or structures being erected, altered, or repaired under contracts with such institutions, organizations or governmental units.

3. The contractor or contractors to whom an award is made on this project will be required to follow the procedure outlined above.

4. The contractor is advised that all requests for payment, partial or final, for work completed under this contract must include a sales tax report submitted in accordance with the procedures outlined above.

CONTRACTOR'S SALES TAX REPORT

N. C. State and Local Sales Taxes Paid

OWNER:			Project:				
CONTRACTOR:			For Period:				
ADDRESS:			To:				
Name of Vendor	Address	Invoice Number	Date	Invoice Amount	N. C. Tax	County Tax	Name of County
TOTAL					\$	\$	

I, _____, certify that the foregoing statement of applicable sales taxes paid in connection with the referenced contract is true to the best of my knowledge and belief. This the _____ day of _____ 20____.

CORPORATE SEAL

(Signed) _____
(Title) _____

Form 880-LG
Rev. 2-16-10



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL AGREEMENT or FORCE ACCOUNT DOCUMENTATION

SUPPLEMENTAL AGREEMENT NO: _____ FORCE ACCOUNT DOCUMENTATION NO: _____

PROJECT NO: _____ FEDERAL AID NO: _____

COUNTY: _____ CONTRACT NO: _____

CONTRACTOR: _____

- 1. Description, location, and justification for change:
- 2. Estimation of quantities of work resulting from change and the basis of payment:

Line Code No.	Description	Unit	Negotiated or Contract Price	Field Change		Original Plan	
				Quantity	Amount	Quantity	Amount

Total Field Change Amount: _____

Total Original Plan Amount: _____

Supplemental Agreement Net Underrun: _____

Supplemental Agreement Net Overrun: _____

- 3. Extension of contract time (if applicable):

**BASIS OF AGREEMENT BETWEEN
THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CONTRACTOR**

1. The Contractor agrees to perform the work described in this Supplemental Agreement in consideration of the payment set out herein.
2. The terms and conditions of said contract are hereby ratified and remain in full force and effect except as modified by such Supplemental Agreement(s) as may heretofore have been entered into between the Department and the Contractor and as modified by this Supplemental Agreement.
3. All terms and conditions of this Supplemental Agreement are herein set out and there are no agreements relating thereto not expressed herein.
4. This Supplemental Agreement shall not constitute a release or waiver of any lawful claims that the Contractor has or may have against the Department under said contract pursuant to G.S. 136-29 except for the matters specifically covered herein.

In witness whereof, the Department and the Contractor have caused this Supplemental Agreement to be executed by their duly authorized representatives.

APPROVAL RECOMMENDED: BY: _____ LOCAL GOVERNMENT AGENCY OFFICIAL DATE: _____	CONTRACTOR: BY: _____ AUTHORIZED REPRESENTATIVE DATE: _____
APPROVAL RECOMMENDED: BY: _____ NCDOT ENGINEER DATE: _____	APPROVAL GRANTED: BY: _____ NCDOT ENGINEER DATE: _____

FORCE ACCOUNT DOCUMENTATION

Documentation of the authorized Force Account work shall be completed for all state and federally-funded projects.

APPROVAL GRANTED: BY: _____ RESIDENT ENGINEER DATE: _____	APPROVAL GRANTED: BY: _____ DIVISION ENGINEER DATE: _____
--	--

FOR CONSTRUCTION AND MATERIALS BRANCH USE ONLY

Approval of the Federal Highway Administration ☐ is ☐ is not requested.

APPROVED with the understanding that Federal participation in this work, the cost of which cannot be met from Federal aid funds provided for under the now effective project agreement, will be contingent upon additional Federal aid funds being made available for the project by a modified project agreement, to be executed prior to or at the final voucher stage.

APPROVED: FEDERAL HIGHWAY ADMINISTRATION

REVIEWED: CONSTRUCTION UNIT

BY: _____ **BY:** _____

DATE: _____ **DATE:** _____

COMMENTS

Main Street Sidewalk Connector

Appendix

- **Type I Categorical Exclusion**
- **SHPO Finding**
- **Catawba Cultural Findings**
- **Nationwide Permit 18**
- **Erosion and Sedimentation Control Permit**
- **Subsurface Exploration & Geotechnical Recommendations**

Type I or II Categorical Exclusion Action Classification Form

STIP Project No.	BL-0052
WBS Element	50275.1.1
Federal Project No.	6107001

A. Project Description:

State Transportation Improvement Project (STIP) BL-0052 proposes to construct a 5-foot-wide sidewalk along the east side of N. Main Street (SR 6107) in Holly Springs (Wake County). See attached vicinity map (Figure 1). The project will complete a gap in the existing sidewalk network from Trellis Pointe Drive to Arbor Creek Drive, a distance of approximately 1,170 feet. The project will also include crosswalks at Trellis Pointe Drive and Arbor Creek Drive. The sidewalk is proposed primarily within the existing right of way, with right of way acquisition proposed at each end of the project. Temporary construction easements would accommodate slope stake limits outside the right of way.

The project is funded by the federal Congestion Mitigation and Air Quality (CMAQ) Improvement Program through NCDOT, and with local funds.

B. Description of Need and Purpose:

Through the project area, N. Main Street is a two-lane shoulder section roadway. To the north and south of each project terminus, N. Main Street has been widened to include curb and gutter and a sidewalk along the eastern side of the roadway. There is no sidewalk between Trellis Pointe Drive and Arbor Creek Drive.

Holly Springs' Transportation Plan classifies this section of N. Main Street as a Thoroughfare with a recommended four-lane, median-divided cross section with either a sidewalk or sidepath on each side of the road. The Town's Future Active Transportation Map indicates proposed sidewalk along N. Main Street through the project area.

Land use in the project vicinity includes a mix of recent and older residential development with some institutional and commercial uses. Notable features in the area include Pine Springs Preparatory Academy (to the north of the study area) and Ting Park (to the south of the study area). The east side of N. Main Street (adjacent to the proposed project) is undeveloped, with the exception of the Trellis Pointe Apartments at the southern terminus. The Holly Springs School for Early Education is on the north side of Arbor Creek Drive adjacent to the northern terminus. (See Figure 2.)

The purpose of the project is to fill this gap in the existing sidewalk network, providing an important pedestrian link between residential areas on the east side of N. Main Street and Ting Park consistent with Holly Springs' Future Active Transportation Map.

C. Categorical Exclusion Action Classification:

Type I(A) - Ground Disturbing Action

D. Proposed Improvements:

3. Construction of bicycle and pedestrian lanes, paths, and facilities

8. Installation of fencing, signs, pavement markings, small passenger shelters, traffic signals, and railroad warning devices where no substantial land acquisition or traffic disruption will occur.

E. Special Project Information:

Protected Species

A Natural Resources Technical Report (NRTR) was completed for the project in August 2023. The NRTR noted that the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) species list for the project location includes several federally proposed or endangered species under the Endangered Species Act (ESA) which have the potential to be affected by activities in the study area. These species are identified in Table 1. For each species, a discussion of the presence or absence of habitat is included below along with the Biological Conclusion rendered based on survey results in the project study area.

Table 1. Species Potentially Affected by Activities in this Location¹

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Notropis mekistocholas</i>	Cape Fear shiner	E	No	No Effect
<i>Rhus michauxii</i>	Michaux's sumac	E	Yes	No Effect
<i>Perimyotis subflavus</i>	tricolored bat	PE	Yes	Programmatic MA-LAA

¹ IPaC data checked on 1/21/2024

E - Endangered

PE - Proposed Endangered

MA-LAA - May Affect, Likely to Adversely Affect

Cape Fear shiner

Biological Conclusion: No Effect

The study area is located upstream of Shearon Harris Reservoir. There is no habitat for Cape Fear shiner within the study area. A review of NHP records updated January 2, 2024 indicates no known occurrences within 1.0 mile of the study area.

Michaux's sumac

Biological Conclusion: No Effect

Habitat for Michaux's sumac is present. The site was surveyed on May 4, 2023 and Michaux's sumac was not observed. A review of NHP records updated January 2, 2024 indicates no known occurrences within 1.0 mile of the study area.

Tricolored bat

Biological Conclusion: Programmatic May Affect, Likely to Adversely Affect

The US Fish and Wildlife Service (USFWS) has issued a Programmatic Conference Opinion (PCO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the tricolored bat (TCB) (*Perimyotis subflavus*) in eastern North Carolina (November 20, 2023). The PCO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for TCB for the NCDOT program is May Affect, Likely to Adversely Affect. Once the TCB is officially listed, the PCO will become the programmatic biological opinion (PBO) by formal request from FHWA and USACE. The PBO will ensure compliance with Section 7 of the Endangered Species Act for approximately five years (effective through December 31, 2028) for all NCDOT projects with a federal nexus in Divisions 1-8. NCDOT, FHWA, and USACE have agreed to three conservation measures (listed in the PCO) which will avoid/minimize take to TCBs. These conservation measures apply to all counties in Divisions 1-8. Note that at this time, no TCB maternity roost trees have been identified in Divisions 1-8. Additionally, NCDOT, FHWA, and USACE have agreed to two Monitoring and Reporting Requirements (M&R).

M&R1: If dead bats suspected of being TCB are observed during clearing, demolition, or construction activities of the Action, such bats should be collected and preserved for identification. Gary Jordan of the USFWS Raleigh Field Office should be contacted at gary_jordan@fws.gov to arrange transfer of the bats. Dead bats should be placed in a freezer until they can be transferred.

M&R2: NCDOT staff and/or consultants must follow the NCDOT Bat Habitat Assessment SOP by filling out Bat Habitat Assessment Forms for projects that affect bridges and culverts. Minimum dimensions for conducting a culvert survey are 5 feet in height and 60 feet in length (subject to change, see SOP for most up-to-date protocols). Bridge and structure assessments are valid for two years. These forms will be submitted to the NCDOT Biological Surveys Group (BSG) using the Survey 123 application or emailed to BSG@ncdot.gov. BSG staff will enter the forms into its database even if no bat presence is detected. If TCBs are detected at a bridge or culvert, the USFWS will be notified via email at gary_jordan@fws.gov.

Northern Long-Eared Bat

The USFWS has issued a revised Programmatic Biological Opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina (December 15, 2022). The revised PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is May Affect, Likely to Adversely Affect. The revised PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8. Although this PBO covers Divisions 1-8, the USFWS only considers NLEBs to be known or potentially found in 30 counties within Divisions 1-8. Note that none of these 30 counties are located within Division 5. NCDOT, FHWA, and USACE have agreed to two Conservation Measures which will avoid/minimize mortality of NLEBs. These Conservation Measures only apply to the 30 current known/potential counties shown on Figure 2 of the revised PBO and do not include any parts of Division 5. Additionally, NCDOT, FHWA, and USACE have agreed to three Monitoring and Reporting Requirements to monitor the impacts of incidental take. (Note: M&R2 is adhered to by Biological Surveys Group (BSG) and is not discussed below).

M&R1: If dead bats suspected of being NLEB are observed during clearing, demolition, or construction activities of the Action, such bats should be collected and preserved for identification. Gary Jordan of the USFWS Raleigh Field Office should be contacted at gary_jordan@fws.gov to arrange transfer of the bats. Dead bats should be placed in a freezer until they can be transferred.

M&R3: NCDOT staff and/or consultants must follow the NCDOT Bat Habitat Assessment SOP by filling out Bat Habitat Assessment Forms for projects that affect bridges and culverts. Minimum dimensions for conducting a culvert survey are 5 feet in height and 60 feet in length (subject to change, see SOP for most up-to-date protocols). Bridge and structure assessments are valid for two years. These forms will be submitted to the NCDOT Biological Surveys Group (BSG) using the Survey 123 application or emailed to BSG@ncdot.gov. BSG staff will enter the forms into its database even if no bat presence is detected. If NLEBs are detected at a bridge or culvert, the USFWS will be notified via email at gary_jordan@fws.gov.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act is enforced by the USFWS. Golden eagles do not nest in North Carolina. Habitat for the bald eagle primarily consists of mature forests in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within 1.0 mile of open water.

A desktop-GIS assessment of the project study area, as well as the area within a 1.0-mile radius of the project limits, was performed on February 2, 2023, using color aerials. One body of water within one mile of the study area was identified as large enough or sufficiently open enough to be considered a potential feeding source. No eagle nests and/or eagles were observed within project study area or within 660 feet of the study area. Additionally, a review of the NHP database updated January 2, 2024 revealed no known occurrences of this species within 1.0 mile of the project study area. Due to minimal habitat, no observations or known occurrences, and minimal impact anticipated for this project, it has been determined that this project will not affect this species.

Jurisdictional Features

Water resources in the study area are part of the Cape Fear River basin [U.S. Geological Survey (USGS) Hydrologic Unit 03030004]. One stream (SA) was identified in the study area (Table 2). The stream is conveyed under N. Main Street with a 24-inch reinforced concrete pipe. The proposed project will impact approximately 85 linear feet of the perennial stream, based on the area 25 feet outside the proposed slope stakes. Though the project lies within the Cape Fear River Basin, the streamside riparian zones within the study area are not protected under provisions of Jordan Lake Water Supply Watershed Buffer Rule.

Table 2. Streams in the Study Area

Stream Name	Map ID	Estimated Impact (lf) ¹	Best Usage Classification	Compensatory Mitigation Required	River Basin Buffer
UT Little Branch	SA	85	C	Undetermined	Not Subject

1 – slope stakes with a 25-foot buffer

UT Little Branch (SA) is not designated as an Outstanding Resource Water (ORW) from its source to its confluence with Little Branch. There are no designated High Quality Waters (HQW) or water supply watersheds (WS-I or WS-II) within, or within 1.0 mile downstream of the study area. The North Carolina 2022 Final 303(d) list of impaired waters does not identify SA or Little Branch within the study area as impaired waters.

One wetland (WA) was identified within the study area (Table 3). The proposed project will impact approximately 0.02 acres of the wetland, based on the area 25 feet outside the proposed slope stakes.

Table 3. Wetlands in the Study Area

Map ID	NCWAM Classification	Hydrologic Classification	NCWAM Rating	404/401 or 401	Area (ac.) in Study Area	Estimated Impact (acres) ¹
WA	Bottomland Hardwood Forest	Riparian	Low	404/401	0.22	0.02

1 – slope stakes with a 25-foot buffer

Stream SA and wetland WA are shown on Figure 3.

Anticipated Permit

A Nationwide Permit or Regional General Permit will likely be required from the U.S. Army Corps of Engineers (USACE) for impacts to Waters of the United States resulting from this project. In addition, an NCDWR Section 401 Water Quality General Certification may be required prior to the issuance of a Section 404 Permit. The permitting agencies have final discretion as to what permit will be required to authorize project construction.

GeoEnvironmental

NCDOT's GeoEnvironmental Section provided pre-scoping comments for the project in a memorandum dated June 29, 2023. No sites of concern were identified within the project area.

Cultural Resources – Section 106 Coordination

In correspondence dated March 30, 2023, the NC State Historic Preservation Office stated they conducted a review of the project and are aware of no historic resources which would be affected by the project.

Tribal Coordination: A tribal coordination letter was sent to the Catawba Indian Nation following the process described in the current NCDOT Tribal Protocol and Programmatic Agreement Procedures manual. In a letter dated May 5, 2023, the Catawba Indian Nation responded they have no immediate

concerns regarding the project, and should be notified if Native American artifacts and/or human remains are located during the ground disturbance phase of the project.

Direct, Indirect, and Cumulative Community Effects

NCDOT's Direct and Indirect Screening Tool (DIST) document was completed for the project in April 2023. The DIST noted that temporary, short-term lane closures on N. Main St, Trellis Pointe Drive, and Arbor Creek Drive are anticipated during some phases of construction. Otherwise, it was concluded that the project will not have any notable community impacts.

Census data does not indicate a notable presence of Environmental Justice (EJ) populations within the project's Demographic Study Area (DSA) and EJ populations were not observed during a site visit. In addition, Census data does not indicate the presence of Limited English Proficiency (LEP) populations meeting the US Department of Justice LEP Safe Harbor threshold, but does indicate the presence of a Spanish speaking population in the DSA that may require language assistance.

Public Involvement

The Town of Holly Springs held a public meeting on November 16, 2023, from 6:00 p.m. until 7:00 p.m. at the town hall. The meeting was advertised via a USPS mailing to approximately 460 property owners and/or residents and through the town's website (with translation available). The two individuals who attended the meeting expressed support for the project.

F. Project Impact Criteria Checklists:

F2. Ground Disturbing Actions – Type I (Appendix A) & Type II (Appendix B)			
Proposed improvement(s) that fit Type I Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix A) including 2, 3, 6, 7, 9, 12, 18, 21, 22 (ground disturbing), 23, 24, 25, 26, 27, 28, &/or 30; &/or Type II Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix B) answer the project impact threshold questions (below) and questions 8 – 31. <i>If any question 1-7 is checked "Yes" then NCDOT certification for FHWA approval is required.</i> <i>If any question 1-31 is checked "Yes" then additional information will be required for those questions in Section G.</i>			
<u>PROJECT IMPACT THRESHOLDS</u> (FHWA signature required if any of the questions 1-7 are marked "Yes".)			Yes No
1	Does the project require formal consultation with U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?	☐	☒
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)?	☐	☒
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	☐	☒
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	☐	☒
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition?	☐	☒
6	Does the project require an Individual Section 4(f) approval?	☐	☒
7	Does the project include adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or have an adverse effect on a National Historic Landmark (NHL)?	☐	☒
If any question 8-31 is checked "Yes" then additional information will be required for those questions in Section G.			
<u>Other Considerations</u>			Yes No
8	Is an Endangered Species Act (ESA) determination unresolved or is the project covered by a Programmatic Agreement under Section 7?	☒	☐
9	Is the project located in anadromous fish spawning waters?	☐	☒
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	☐	☒
11	Does the project impact Waters of the United States in any of the designated mountain trout streams?	☐	☒
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	☐	☒
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	☐	☒

Other Considerations for Type I and II Ground Disturbing Actions (continued)		Yes	No
14	Does the project include a Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a No Effect, including archaeological remains?	☐	☒
15	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?	☐	☒
16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	☐	☒
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?	☐	☒
18	Does the project require a U.S. Coast Guard (USCG) permit?	☐	☒
19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	☐	☒
20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?	☐	☒
21	Does the project impact federal lands (e.g. U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands?	☐	☒
22	Does the project involve any changes in access control or the modification or construction of an interchange on an interstate?	☐	☒
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	☐	☒
24	Will maintenance of traffic cause substantial disruption?	☐	☒
25	Is the project inconsistent with the STIP, and where applicable, the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP)?	☐	☒
26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), Tribal Lands, or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	☐	☒
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	☐	☒
28	Does the project include a <i>de minimis</i> or programmatic Section 4(f)?	☐	☒
29	Is the project considered a Type I under the NCDOT Noise Policy?	☐	☒
30	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	☐	☒
31	Are there other issues that arose during the project development process that affected the project decision?	☐	☒

G. Additional Documentation as Required from Section F (ONLY for questions marked 'Yes'):

8. Is an Endangered Species Act (ESA) determination unresolved or is the project covered by a Programmatic Agreement under Section 7?

Tricolored bat

The US Fish and Wildlife Service (USFWS) has issued a Programmatic Conference Opinion (PCO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the tricolored bat (TCB) (*Perimyotis subflavus*) in eastern North Carolina (November 20, 2023). The PCO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for TCB for the NCDOT program is May Affect, Likely to Adversely Affect. Once the TCB is officially listed, the PCO will become the programmatic biological opinion (PBO) by formal request from FHWA and USACE. The PBO will ensure compliance with Section 7 of the Endangered Species Act for approximately five years (effective through December 31, 2028) for all NCDOT projects with a federal nexus in Divisions 1-8. NCDOT, FHWA, and USACE have agreed to three conservation measures (listed in the PCO) which will avoid/minimize take to TCBs. These conservation measures apply to all counties in Divisions 1-8. Note that at this time, no TCB maternity roost trees have been identified in Divisions 1-8. Additionally, NCDOT, FHWA, and USACE have agreed to two Monitoring and Reporting Requirements (M&R).

M&R1: If dead bats suspected of being TCB are observed during clearing, demolition, or construction activities of the Action, such bats should be collected and preserved for identification. Gary Jordan of the USFWS Raleigh Field Office should be contacted at gary_jordan@fws.gov to arrange transfer of the bats. Dead bats should be placed in a freezer until they can be transferred.

M&R2: NCDOT staff and/or consultants must follow the NCDOT Bat Habitat Assessment SOP by filling out Bat Habitat Assessment Forms for projects that affect bridges and culverts. Minimum dimensions for conducting a culvert survey are 5 feet in height and 60 feet in length (subject to change, see SOP for most up-to-date protocols). Bridge and structure assessments are valid for two years. These forms will be submitted to the NCDOT Biological Surveys Group (BSG) using the Survey 123 application or emailed to BSG@ncdot.gov. BSG staff will enter the forms into its database even if no bat presence is detected. If TCBs are detected at a bridge or culvert, the USFWS will be notified via email at gary_jordan@fws.gov.

Northern Long-Eared Bat

The USFWS has issued a revised Programmatic Biological Opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina (December 15, 2022). The revised PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is May Affect, Likely to Adversely Affect. The revised PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8. Although this PBO covers Divisions 1-8, the USFWS only considers NLEBs to be known or potentially found in 30 counties within Divisions 1-8. Note that none of these 30 counties are located within Division 5. NCDOT, FHWA, and USACE have agreed to two Conservation Measures which will avoid/minimize mortality of NLEBs. These Conservation Measures only apply to the 30 current known/potential counties shown on Figure 2 of the revised PBO and do not include any parts of Division 5. Additionally, NCDOT, FHWA, and USACE have agreed to three Monitoring and Reporting Requirements to monitor the impacts of incidental take. (Note: M&R2 is adhered to by Biological Surveys Group (BSG) and is not discussed below).

M&R1: If dead bats suspected of being NLEB are observed during clearing, demolition, or construction activities of the Action, such bats should be collected and preserved for identification. Gary Jordan of the USFWS Raleigh Field Office should be contacted at gary_jordan@fws.gov to arrange transfer of the bats. Dead bats should be placed in a freezer until they can be transferred.

M&R3: NCDOT staff and/or consultants must follow the NCDOT Bat Habitat Assessment SOP by filling out Bat Habitat Assessment Forms for projects that affect bridges and culverts. Minimum dimensions for conducting a culvert survey are 5 feet in height and 60 feet in length (subject to change, see SOP for most up-to-date protocols). Bridge and structure assessments are valid for two years. These forms will be submitted to the NCDOT Biological Surveys Group (BSG) using the Survey 123 application or emailed to BSG@ncdot.gov. BSG staff will enter the forms into its database even if no bat presence is detected. If NLEBs are detected at a bridge or culvert, the USFWS will be notified via email at gary_jordan@fws.gov.

H. Project Commitments (attach as Green Sheet to CE Form):

NCDOT PROJECT COMMITMENTS

STIP Project No. **BL-0052**
N. Main Street (SR 6107) – Trellis Point Drive to Arbor Creek Drive in
Holly Springs. Complete Sidewalk Gap.
Wake County, NC
Federal Aid Project No. 6107001
WBS Element 50275.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

No special commitments have been made to date.

I. Categorical Exclusion Approval:

STIP Project No.	BL-0052
WBS Element	50275.1.1
Federal Project No.	6107001

Prepared By:

1/30/2024	Robin Pugh
Date	Robin Pugh, AICP, Project Delivery Leader Rummel, Klepper & Kahl, LLP

Prepared For:

DocuSigned by:
Tim Athy 02/09/2024
F2FF0D0D67C8496...

Tim Athy, PE, Transportation Engineer, Town of Holly Springs

Reviewed By:

02/09/2024	Chris Murray
Date	Christopher A. Murray, SPWS Project Engineer for Planning and Environmental Studies – Division 5 North Carolina Department of Transportation



Approved

- If NO grey boxes are checked in Section F (pages 2 and 3), NCDOT approves the Type I or Type II Categorical Exclusion.



Certified

- If ANY grey boxes are checked in Section F (pages 2 and 3), NCDOT certifies the Type I or Type II Categorical Exclusion for FHWA approval.
- If classified as Type III Categorical Exclusion.

02/11/2024	Ben Upshaw
Date	Ben Upshaw, PE, Division Project Development Engineer for Brandon H. Jones, PE, Division Engineer, Highway Division 5 North Carolina Department of Transportation

FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

Date	for Yolonda K. Jordan, Division Administrator Federal Highway Administration
------	---

Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VII of the NCDOT-FHWA CE Programmatic Agreement for more details).



N. MAIN STREET IMPROVEMENT PROJECT

PUBLIC MEETING MAP



TOWN OF
HOLLY SPRINGS
UTILITIES & INFRASTRUCTURE

PRELIMINARY PLANS
DESIGN SUBJECT TO CHANGE

DESIGN CRITERIA	
FUNCTIONAL CLASS.	2-LANE, UNDIVIDED
DESIGN SPEED.	50mph
MAX. SUPERELEVATION.	4%
HORIZONTAL SCALE 1" = 50'	

BEGIN PROJECT

TO HOLLY SPRINGS RD

TRELLIS POINTE LLC
DB 8014 PG 622
PB 1998 PG 1272

TRELLIS POINTE

TRELLIS POINTE
APARTMENTS

N. MAIN ST

A & A BUILDING LLC
DB 15978 PG 1248
PB 1997 PG 1339

A & A BUILDING LLC
DB 15978 PG 1248
PB 1996 PG 1414

CWN1970 LLC
DB 14870 PG 1722
PB 1996 PG 221

HOLLY SPRINGS
SCHOOL EARLY
EDUCATION

COMMONS DR

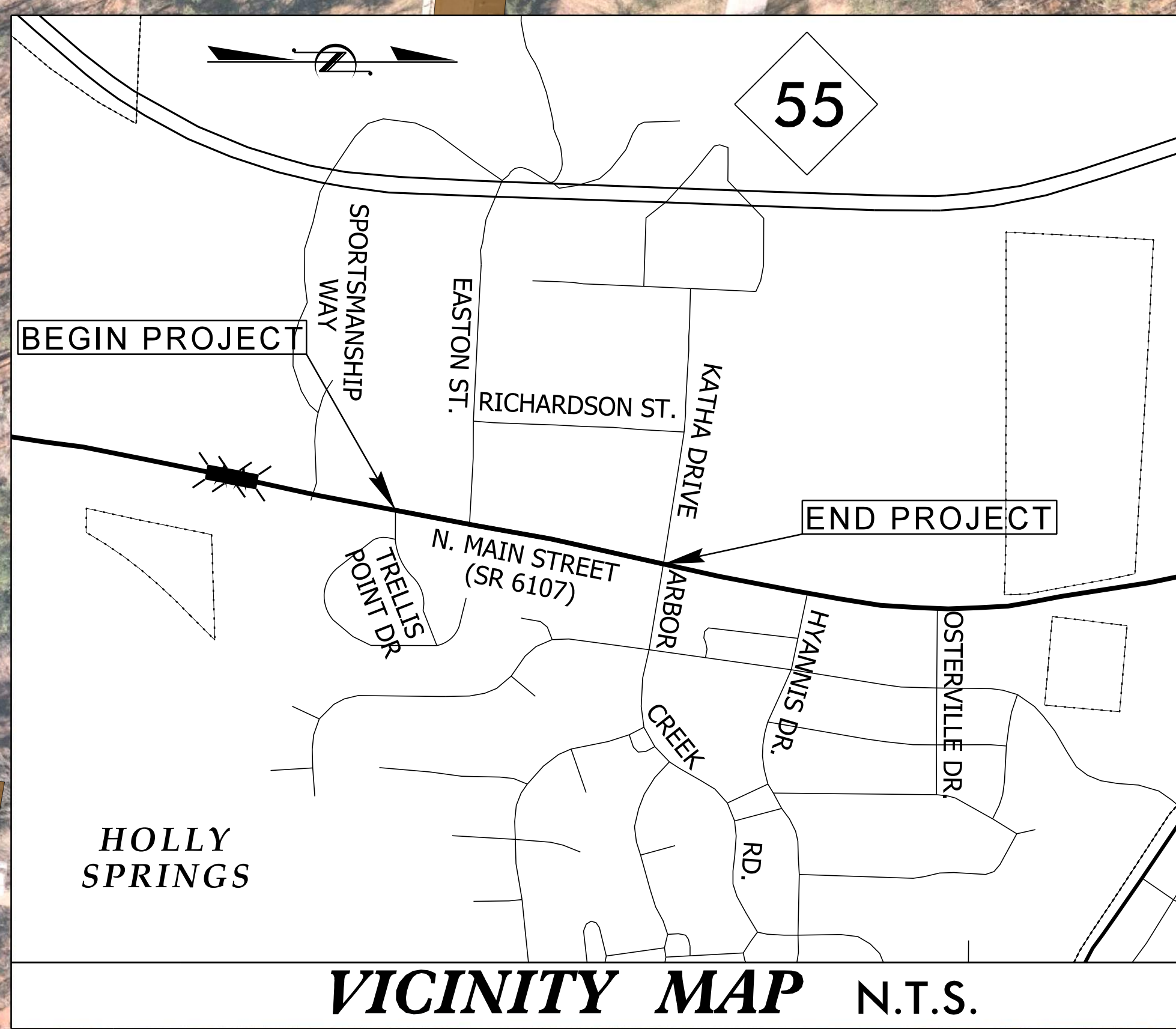
ARBOR CREST RD

ARBOR CREEK RD

KATHA DR

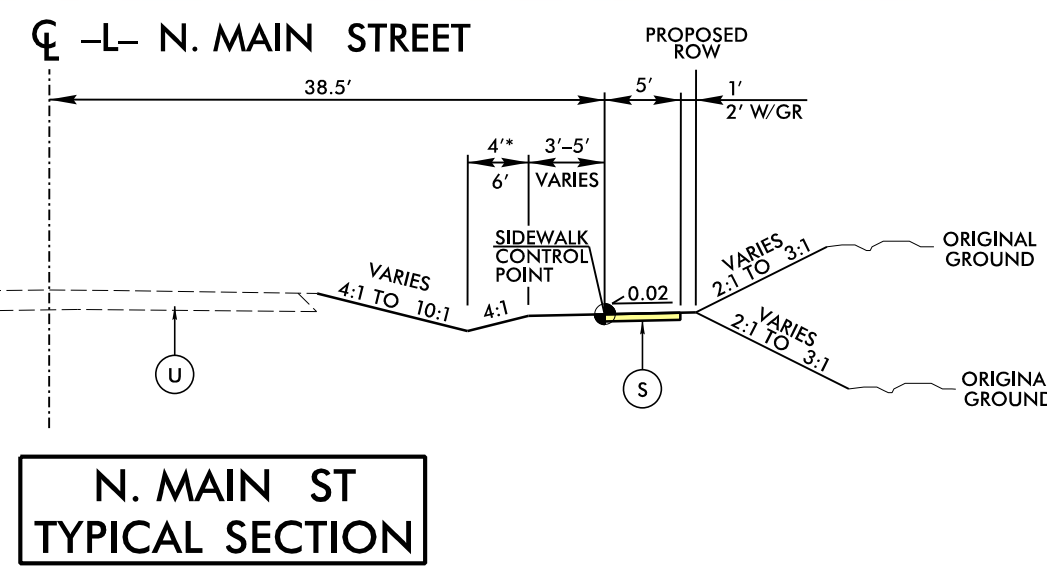
END PROJECT

TO SUNSET LAKE RD.



LEGEND

- EXISTING RIGHT OF WAY
- EXISTING PAVEMENT
- EXISTING PAVEMENT, SIDEWALK, CURB & GUTTER TO BE RETAINED
- EXISTING PROPERTY LINES
- EXISTING BUILDING
- PROPOSED SLOPE STAKES
- PROPOSED SIDEWALK
- PROPOSED RIGHT OF WAY
- PROPOSED CONSTRUCTION EASEMENT
- PROPOSED RIGHT OF WAY





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

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

March 30, 2023

ROBIN PUGH, AICP

rpugh@rkk.com

RKK

8601 Six Forks Road, Forum 1, Suite 700
Raleigh, NC 27615

Re: Complete sidewalk gaps along North Main Street from Trellis Pointe Drive to Arbor Creek Drive,
Holly Springs, BL-0052, Wake County, 23-E-0000-0170, ER 23-0517

Dear Ms. Pugh:

Thank you for your letter of February 14, 2023, regarding the above-referenced undertaking. We have reviewed the submittal and offer the following comments.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

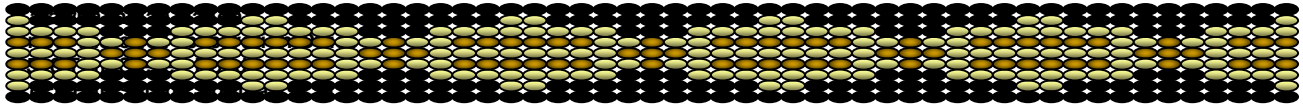
The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

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

Sincerely,

A handwritten signature in blue ink that reads "Renee Gledhill-Earley".

for Ramona Bartos, Deputy
State Historic Preservation Officer



Office 803-328-2427
Fax 803-328-5791

May 5, 2023

Attention: Tammy Richards
FHWA-NC Division of Transportation Specialist
310 New Bern Avenue, Suite 410
Raleigh, NC 27601

Re. THPO #	TCNS #	Project Description
2023-193-138		Proposing to construct a 5 ft wide sidewalk along the east side of N. Main Street from Trellis Pointe Drive to Arbor Creek Drive, a distance of approximately 1,125 ft.

Dear Ms. Richards,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Wenonah G. Haire
Tribal Historic Preservation Officer

From: [Jordan, Gary](#)
To: [Chris Rivenbark](#)
Subject: Re: [EXTERNAL] Michaux's sumac and bald eagle status-BL-0052 sidewalk extension along N. Main Street (SR 6107) from Trellis Point Drive to Arbor Creek Drive in Wake County
Date: Monday, December 8, 2025 10:10:00 AM
Attachments: [image001.png](#)

EXTERNAL EMAIL: Do not click links or open attachments unless you trust the 'Sender' and know the content is safe.

Chris,

Given the suburban location of this project, I am comfortable with keeping the No Effect conclusion without any additional surveys.

Gary Jordan
Fish and Wildlife Biologist, Liaison to NCDOT, Bat Ecologist
U.S. Fish and Wildlife Service
3916 Sunset Ridge Rd
Raleigh, NC 27607
MS Teams Phone: 984-308-0822

From: Chris Rivenbark <crivenbark@rkk.com>
Sent: Wednesday, December 3, 2025 9:42 AM
To: Jordan, Gary <gary_jordan@fws.gov>
Subject: [EXTERNAL] Michaux's sumac and bald eagle status-BL-0052 sidewalk extension along N. Main Street (SR 6107) from Trellis Point Drive to Arbor Creek Drive in Wake County

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Good morning Gary,

You may remember this project from previous emails related to LAP usage of Programmatic. Division 5 is reviewing the draft Construction Consultation for the Town of Holly Springs and wasn't comfortable signing it due to the date of the last Michaux's sumac and bald eagle surveys. Neither Michaux's sumac or bald eagles/nests were observed on May 4, 2023 which was the latest survey. A review of NHP records updated October 2025, indicates no known occurrences within 1.0 mile of the study area.

The Town of Holly Springs is hoping to start construction early next year and Division 5 suggested asking if you would be comfortable with the current No Effect biological conclusions being considered valid to allow for the Construction Consultation to be completed and construction commencing as scheduled. The 404 permit is still valid and will be through March 2027.

If you are not comfortable with the No Effect biological conclusion remaining valid would a post window Michaux's sumac survey if we did so this week or next week be an option?

Copies of the vicinity map and permit drawing title sheet to show limits are attached. The Google pin link is:

<https://maps.app.goo.gl/ZutQ9NNsKfNaiUK38>

Please let me know if you have any questions or feel free to call if you'd like to discuss.

Thank you,

CHRIS RIVENBARK, PWS, CPM

Project Delivery Leader



8601 Six Forks Road
Forum 1 - Suite 700
Raleigh, NC 27615

919.215.6408 Cell | 919.878.9560 Main

www.rkk.com

Responsive People | Creative Solutions

"RK&K" and "RK&K Engineers" are registered trade names of Rummel, Klepper & Kahl, LLP, a Maryland limited liability partnership. This message contains confidential information intended only for the person or persons named above. If you have received this message in error, please immediately notify the sender by return email and delete the message. Thank you. Rummel, Klepper & Kahl, LLP ensures nondiscrimination in all programs and activities in accordance with Title VI of the Civil Rights Act of 1964. RK&K does not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors. We also note that RK&K will ensure minorities will be afforded full opportunity to submit proposals and not be discriminated against on the grounds of race, color, or national origin in consideration for an award. Rummel, Klepper & Kahl, LLP is an equal opportunity employer that values diversity at all levels. If you need more information or special assistance for persons with disabilities or limited English proficiency, contact our Human Resources office at (410) 728-2900 for further assistance.

November 11, 2024

MEMORANDUM TO: Tim Athy, PE, Engineer III
Town of Holly Springs

FROM: Chris Rivenbark, PWS, CPM, Project Delivery Leader
RK&K

SUBJECT: N. Main Street Sidewalk Project, NCDOT STIP BL-0052
Town of Holly Springs, Wake County, NC.

This permit package replaces the version dated October 11, 2024.

The US Army Corps of Engineers issued written verification for the Section 404 Nationwide Permit 18 instead of the Nationwide Permit 3 as included in the October 11, 2024 permit package. Written approval of the applicable Section 401 Water Quality Certification No. 4249 from the NC Division of Water Resources is not required for the subject project as currently designed. Please find enclosed updated general conditions for the following permits for this project.

Agency	Permit Type	Permit Expiration
US Army Corps of Engineers	Section 404 Clean Water Act Nationwide Permit 18	March 14, 2026
NC Division of Water Resources	Section 401 Water Quality Certification No. 4249	March 14, 2026

Work is authorized by the above referenced permits provided it is accomplished in strict accordance with the attached plans and general permit conditions. Any deviation from the attached plans or general permit conditions may require written approvals from the regulatory permitting agencies listed above.

If you have any questions, please contact me at crivenbark@rkk.com or (919) 878-9560.

Sincerely,

Chris Rivenbark, PWS, CPM
Chris Rivenbark, PWS, CPM, Project Delivery Leader
RK&K

Digitally signed by Chris Rivenbark,
PWS, CPM
Date: 2024.11.11 07:54:28 -05'00'

Enclosure



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, WILMINGTON DISTRICT
RALEIGH REGULATORY FIELD OFFICE
331 HERITAGE TRADE DRIVE SUITE 105
WAKE FOREST NORTH CAROLINA 27587

November 2, 2024

Regulatory Division
SAW-2023-00419

Sent Via email: tim.athy@hollyspringsnc.gov

Tim Athy, P.E.
Town of Holly Springs
Utilities & Infrastructure
128 S. Main Street
Holly Springs, North Carolina 27540

Dear Mr. Athy, P.E.:

This letter is in response to the Pre-Construction Notification (PCN) you submitted to the Wilmington District, Raleigh Regulatory Field Office on October 11, 2024, for a Department of the Army Nationwide permit (NWP) verification. This project has been assigned the file number SAW-2023-00419 and is known as Town of Holly Springs N. Main Street Sidewalk. This file number should be referenced in all correspondence concerning this project.

A review of the information provided indicates that the proposed work would include the unavoidable loss of 0.011 acre of wetland, and 15 linear feet of an unnamed tributary to Little Creek associated with construction of a new sidewalk connecting two existing sidewalks between Trellis Pointe Drive and Arbor Creek Drive (approximately 1,170 feet) Specifically, this verification authorizes the permanent loss of 0.011 acre of Wetland WA (Impact W1), the temporary impact to 0.001 acre of Wetland WA (Impact W2), the permanent loss of 15 linear feet of Stream SA (Impact S1), and an additional 19 linear feet of temporary impact to Stream SA (Impact S2). The project area for this determination includes an approximate 0.1 acre area comprising waters and adjacent areas to be disturbed during construction. The project/review area is located in the Cape Fear River watershed, along North Main Street in the Town of Holly Springs, at Latitude 35.673176 and Longitude -78.833662; in Holly Springs, Wake County, North Carolina.

We have determined that the proposed work is authorized by Nationwide Permit 18 pursuant to authorities under Section 404 of the Clean Water Act (33 U.S.C § 1344) **and** Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 408). The proposed work must be accomplished in strict accordance with the general permit conditions, any regional conditions, the special conditions listed in this letter, the application materials, and the enclosed plans. If the extent of the project area and/or nature of the authorized

impacts to waters are modified, a revised PCN must be submitted to this office for written approval before work is initiated. Any violation of permit conditions or deviation from your submitted plans may subject the permittee to enforcement action.

This verification is valid until March 14, 2026, unless prior to this date the subject NWP(s) is suspended, revoked, or is modified such that the activity no longer complies with the terms and conditions of this NWP. If you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

Project Specific Special Conditions:

1. State Transportation Improvement Project (STIP) The US Fish and Wildlife Service (USFWS) has issued a Programmatic Conference Opinion (PCO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the tricolored bat (TCB) (*Perimyotis subflavus*) in eastern North Carolina (November 20, 2023). The NC Department of Transportation Programmatic Biological Opinion, effective through December 31, 2028, is incorporated by reference. Use of the requested Nationwide Permit is conditioned on compliance with this document.
2. The USFWS has issued a revised Programmatic Biological Opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina (December 15, 2022). The NC Department of Transportation Programmatic Biological Opinion, effective through December 31, 2030, is incorporated by reference. Use of the requested Nationwide Permit is conditioned on compliance with this document.
3. Use of the requested Nationwide Permit is conditioned on compliance with North Carolina's National Pollutant Discharge Elimination System (NPDES) Permit Number NCS000250.
4. Use of the requested Nationwide Permit is conditioned on compliance with North Carolina Division of Water Resources' Water Quality General Certification number 4249, attached to this verification.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Resources (telephone 919-807-6300) to determine Section 401 requirements.

This NWP verification does not preclude the necessity to obtain any other Federal, State, or local permits, licenses, and/or certifications, which may be required.

If you have any questions related to this verification or have issues accessing documents referenced in this letter, please contact Christopher Hopper, SAD TREC Team Lead of the Raleigh Regulatory Field Office at 919-588-9153, by mail at the above address, or by email at christopher.d.hopper@usace.army.mil. If you have any questions related to follow-up actions associated with this permit, such as compliance inspections, please contact George (Lyle) Phillips, PM of the Raleigh Regulatory Field Office at 919-588-9200, by mail at 3331 Heritage Trade Drive, Suite 105, Wake

Forest, North Carolina 27587, or by email at George.L.Phillips@usace.army.mil. Please take a moment to complete our customer satisfaction survey located at <https://regulatory.ops.usace.army.mil/customer-service-survey/>.

Sincerely,

A handwritten signature in black ink, appearing to read 'CH', followed by a long horizontal line.

Christopher Hopper
SAD TREC Team Lead

Enclosures

Cc (w/enclosures)
Chris Rivenbark, RK&K (via crivenbark@rkk.com)

Compliance Certification Form

File Number: SAW-2023-00419

County: Wake

Permittee: Utilities & Infrastructure, Tim Athy, P.E.

Project Name: Town of Holly Springs N. Main Street Sidewalk

Date Verification Issued: 11/2/2024

Project Manager: Christopher Hopper

Within 30 days of completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

**US ARMY CORPS OF ENGINEERS
Wilmington District
Attn: George L. Phillips
Raleigh Regulatory Field Office
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587
or
christopher.d.hopper@usace.army.mil**

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work, and mitigation (if applicable), authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit including any general or specific conditions.

Date Authorized Work Started: _____ **Completed:** _____

Describe any deviations from permit (attach drawing(s) depicting the deviations):

***Note: The description of any deviations on this form does not constitute approval by the Corps.**

Signature of Permittee

Date

Nationwide Permit 18

Minor Discharges

Effective Date: February 25, 2022 / Expiration Date: March 14, 2026

Authority: Sections 10 and 404

Minor discharges of dredged or fill material into all waters of the United States, provided the activity meets all of the following criteria:

- (a) The quantity of discharged dredged or fill material and the volume of area excavated do not exceed 25 cubic yards below the plane of the ordinary high water mark or the high tide line;
- (b) The discharge of dredged or fill material will not cause the loss of more than 1/10-acre of waters of the United States; and
- (c) The discharge of dredged or fill material is not placed for the purpose of a stream diversion.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the discharge of dredged or fill material or the volume of area excavated exceeds 10 cubic yards below the plane of the ordinary high water mark or the high tide line, or (2) the discharge of dredged or fill material is in a special aquatic site, including wetlands. (See general condition 32.)

GENERAL CONDITIONS

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation.

- (a) No activity may cause more than a minimal adverse effect on navigation.
- (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
- (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the

United States. No claim shall be made against the United States on account of any such removal or alteration.

2. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.
3. **Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
4. **Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
5. **Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.
6. **Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).
7. **Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
8. **Adverse Effects from Impoundments.** If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
9. **Management of Water Flows.** To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).
10. **Fills Within 100-Year Floodplains.** The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
11. **Equipment.** Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. **Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. **Removal of Structures and Fills.** Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. **Proper Maintenance.** Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. **Single and Complete Project.** The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. **Wild and Scenic Rivers.**

(a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

17. **Tribal Rights.** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. **Endangered Species.**

(a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which “may affect” a listed species or critical habitat unless ESA

section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of “effects of the action” for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding “activities that are reasonably certain to occur” and “consequences caused by the proposed action.”

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species specific permit conditions to the NWP.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district

engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre- construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their worldwide Web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.

19. **Migratory Birds and Bald and Golden Eagles.** The permittee is responsible for ensuring that an action authorized by NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. **Historic Properties.**

(a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic

Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. **Discovery of Previously Unknown Remains and Artifacts.** Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. **Designated Critical Resource Waters.** Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional

waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 5258 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. **Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (*i.e.*, on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee- responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to an herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. **Safety of Impoundment Structures.** To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. **Water Quality.**

(a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFF 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. **Coastal Zone Management.** In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. **Regional and Case-By-Case Conditions.** The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. **Use of Multiple Nationwide Permits.** The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. **Transfer of Nationwide Permit Verifications.** If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district

office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. **Compliance Certification.** Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. **Activities Affecting Structures or Works Built by the United States.** If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. **Pre-Construction Notification.**

(a) *Timing.* Where required by the terms of the NWP, the permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The

request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

- (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
- (2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the pr set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification:* The PCN must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed activity;
- (3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;
- (4)
 - (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no

more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans).

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate.

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act.

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act.

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification:* The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination:*

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity’s compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity’s adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for:

(i) All NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States;

(ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and

(iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so, contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity’s compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will

indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

DISTRICT ENGINEER'S DECISION

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either:

(a) That the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit;

(b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or

(c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

FURTHER INFORMATION

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

DEFINITIONS

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term “discharge” means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water’s surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine

shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: Re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: (1) Held in trust by the United States for the benefit of any Indian tribe or individual; or (2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWP, a waterbody is a “water of the United States.” If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

REGIONAL CONDITIONS:

The following Regional Conditions have been approved by the Wilmington District for the Nationwide Permits (NWP) published in the January 13, 2021, and December 27, 2021, *Federal Register* (86 FR 2744 and 86 FR 73522) announcing the reissuance of 52 existing (NWP) and five new NWPs, as well as the reissuance of NWP general conditions and definitions with some modifications.

A. EXCLUDED WATER AND/OR AREAS

The Corps has identified waters that will be excluded from the use of all NWP's during certain timeframes. These waters are:

1. **Anadromous Fish Spawning Areas.** Work in waters of the U.S. designated by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning areas are prohibited from February 15th through June 30th, without prior written approval from the Corps and the appropriate wildlife agencies (NCDMF, NCWRC and/or the National Marine Fisheries Service (NMFS)). Work in waters of the U.S. designated by NCWRC as primary nursery areas in inland waters are prohibited from February 15th through September 30th, without prior written approval from the Corps and the appropriate wildlife agencies. Work in waters of the U.S. designated by NCDMF as primary nursery areas shall be coordinated with NCDMF prior to being authorized by this NWP. Coordination with NCDMF may result in a required construction moratorium during periods of significant biological productivity or critical life stages.
2. **Trout Waters Moratorium.** Work in waters of the U.S. in the designated trout watersheds of North Carolina are prohibited from October 15th through April 15th without prior written approval from the NCWRC, or from the Eastern Band of Cherokee Indians (EBCI) Fisheries and Wildlife Management (FWM) office if the project is located on EBCI trust land. (See Section C.3. below for information on the designated trout watersheds).
3. **Sturgeon Spawning Areas.** No in-water work shall be conducted in waters of the U.S. designated by the National Marine Fisheries Service as Atlantic sturgeon critical habitat from February 1st through June 30th. No in-water work shall be conducted in waters of the U.S. in the Roanoke River designated as Atlantic sturgeon critical habitat from February 1st through June 30th, and August 1st through October 31st, without prior written approval from NMFS.
4. **Submerged Aquatic Vegetation.** Impacts to Submerged Aquatic Vegetation (SAV) are not authorized by any NWP, except NWP 48, NWP 55 and NWP 56, unless Essential Fish Habitat (EFH) consultation has been completed pursuant to the Magnuson-Stevens Fisheries Conservation and Management Act (Magnuson-Stevens Act). Permittees shall submit a PCN (See NWP General Condition 32) to the District Engineer prior to commencing the activity if the project would affect SAV. The permittee may not begin work until notified by the Corps that the requirements of the Magnuson-Stevens Act have been satisfied and that the activity is verified.

B. REGIONAL CONDITIONS APPLICABLE TO ALL NWP's

1. **Critical Habitat in Western NC.** For proposed activities within waters of the U.S. that require a Pre-Construction Notification (PCN) and are located in the thirteen counties listed below, permittees must provide a copy of the PCN to the U.S. Fish and Wildlife Service (USFWS), 160 Zillicoa Street, Asheville, North Carolina 28801 and the Corps Asheville Regulatory Field Office. Please see General Condition 18 for specific PCN requirements

related to the Endangered Species Act and the below website for information on the location of designated critical habitat.

Counties with tributaries that drain to designated critical habitat that require notification to the Asheville U.S. Fish and Wildlife Service: Avery, Cherokee, Graham, Haywood, Henderson, Jackson, Macon, Mecklenburg, Mitchell, Swain, Transylvania, Union and Yancey.

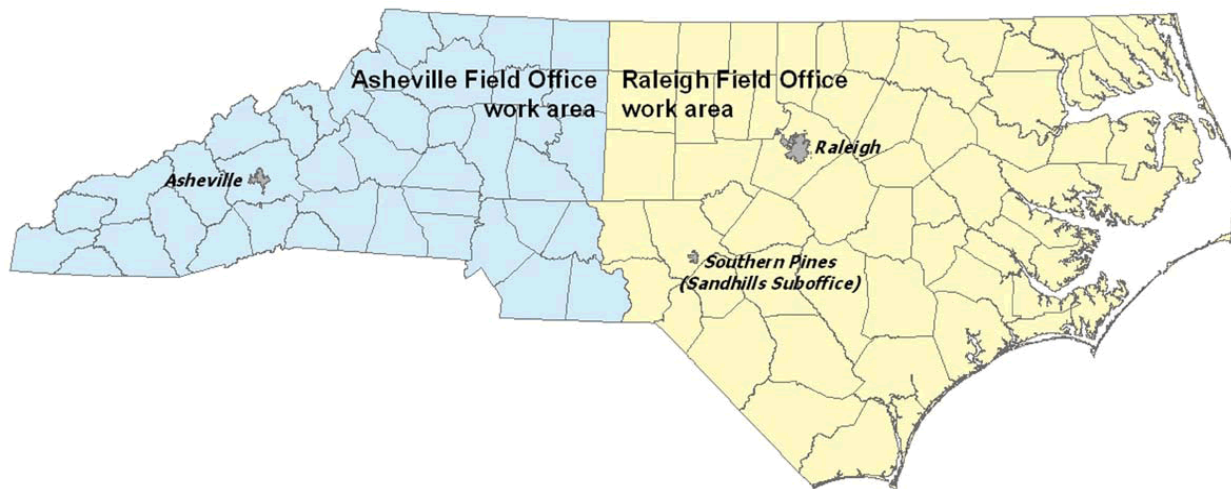
Website and office addresses for Endangered Species Act Information:

The Wilmington District has developed the following website for permittees which provides guidelines on how to review linked websites and maps in order to fulfill NWP General Condition 18 (Endangered Species) requirements:

<http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram/AgencyCoordination/ESA.aspx>.

Permittees who do not have internet access may contact the appropriate U.S. Fish and Wildlife Service offices listed below or Corps at (910) 251-4850.

Below is a map of the USFWS Field Office Boundaries:



Asheville U.S. Fish and Wildlife Service Office counties: All counties west of and including Anson, Stanly, Davidson, Forsythe and Stokes Counties.

U.S. Fish and Wildlife Service
Asheville Field Office
160 Zillicoa Street
Asheville, NC 28801
Telephone: (828) 258-3939

Raleigh U.S. Fish and Wildlife Service Office counties: All counties east of and including Richmond, Montgomery, Randolph, Guilford, and Rockingham Counties.

U.S. Fish and Wildlife Service
Raleigh Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
Telephone: (919) 856-4520

2. **Special Designation Waters.** Prior to the use of any NWP that involves a discharge of dredged or fill material in any of the following identified waters and/or adjacent wetlands in North Carolina, permittees shall submit a PCN to the District Engineer prior to commencing the activity (see General Condition 32). The North Carolina waters and wetlands that require additional PCN requirements are:

“Primary Nursery Areas” (PNA), including inland PNA, as designated by the North Carolina Marine Fisheries Commission and/or the North Carolina Wildlife Resources Commission. The definition of and designated PNA waters can be found in the North Carolina State Administrative Code at Title 15A, Subchapters 3R and 10C (15A NCAC 03R .0103; 15A NCAC 10C .0502; and 15A NCAC 10C .0503) and at the following web pages:

- <http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2003%20-%20marine%20fisheries/subchapter%20r/15a%20ncac%2003r%20.0103.pdf>
- <http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2010%20-%20wildlife%20resources%20and%20water%20safety/subchapter%20c/15a%20ncac%2010c%20.0502.pdf>
- <http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2010%20-%20wildlife%20resources%20and%20water%20safety/subchapter%20c/15a%20ncac%2010c%20.0503.pdf>

3. **Trout Waters.** Prior to any discharge of dredge or fill material into streams, waterbodies or wetlands within the 294 designated trout watersheds of North Carolina, the permittee shall submit a PCN (see General Condition 32) to the District Engineer prior to commencing the activity. The permittee shall also provide a copy of the PCN to the appropriate NCWRC office, or to the EBCI FWM Office (if the project is located on EBCI trust land), to facilitate the determination of any potential impacts to designated Trout Waters.

NCWRC and NC Trout Watersheds:

NCWRC Contact**	Counties that are entirely within Trout Watersheds*	Counties that are partially within Trout Watersheds*
--------------------	--	--

Mountain Coordinator 645 Fish Hatchery Rd., Building B Marion, NC 28752 828-803- 6054 For NCDOT Projects: NCDOT Coordinator 12275 Swift Rd. Oakboro, NC 28129 704-984- 1070	Alleghany Ashe Avery Graham Haywood	Jackson Macon Swain Transylvania Watauga	Burke Buncombe Caldwell Cherokee Clay Henderson Madison	McDowell Mitchell Polk Rutherford Surry Wilkes Yancey
EBCI Contact**	Counties that are within Trout Watersheds*			
Office of Natural Resources P.O. Box 1747, Cherokee, NC 28719 (828) 359-6113	Qualla Boundary and non- contiguous tracts of trust land located in portions of Swain, Jackson, Haywood, Graham and Cherokee Counties.			

*NOTE: To determine PCN requirements, contact the Corps Asheville Regulatory Field Office at (828) 271-7980 or view maps showing trout watersheds in each County at the following webpage: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout/>.

**If a project is located on EBCI trust land, submit the PCN in accordance with Regional Condition C.16. Contact the Corps Asheville Regulatory Field Office at (828) 271-7980 with questions.

4. **Western NC Waters and Corridors.** The permittee shall submit a PCN (see General Condition 32) to the District Engineer prior to commencing the activity in waters of the U.S. if the activity will occur within any of the following identified waters in western North Carolina, within 0.5 mile on either side of these waters, or within 0.75 mile of the Little Tennessee River, as measured from the top of the bank of the respective water (i.e., river, stream, or creek):

Brasstown Creek
Burningtown Creek

Cane River
Caney Fork
Cartoogechaye Creek
Chattooga River
Cheoah River
Cowee Creek
Cullasaja River
Deep Creek
Ellijay Creek
French Broad River
Garden Creek
Hiwassee River
Hominy Creek
Iotla Creek
Little Tennessee River (within the river or within 0.75 mile on either side of this river)
Nantahala River
Nolichucky River
North Fork French Broad River
North Toe River
Nottley River
Oconaluftee River (portion not located on trust/EBCI land)
Peachtree Creek
Shooting Creek
Snowbird Creek
South Toe River
Stecoah Creek
Swannanoa River
Sweetwater Creek
Tuckasegee River (also spelled Tuckaseegee or Tuckaseigee)
Valley River
Watauga Creek
Watauga River
Wayah Creek
West Fork French Broad River

To determine PCN requirements, contact the Corps Asheville Regulatory Field Office at (828) 271-7980 or view maps for all corridors at the following webpage:

<http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Designated-Special-Waters.aspx>.

5. **Limitation of Loss of Stream Bed.** NWP's may not be used for activities that may result in the loss of more than 0.05 acres of stream bed, except for NWP 32.

6. **Pre-Construction Notification for Loss of Stream Bed Exceeding 0.02 acres.** The permittee shall submit a PCN to the District Engineer prior to commencing the activity (see General Condition 32) prior to the use of any NWP for any activity that results in the loss of more than 0.02 acres of stream bed. This applies to NWP's that do not have PCN requirements as well as those NWP's that require a PCN.

7. **Mitigation for Loss of Stream Bed.** For any NWP that results in a loss of more than 0.02 acres of stream bed, the permittee shall provide a mitigation proposal to compensate for more than minimal individual and cumulative adverse impacts to the aquatic environment, unless the

District Engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal. For stream bed losses of 0.02 acres or less that require a PCN, the District Engineer may determine, on a case-by-case basis, that compensatory mitigation is required to ensure that the activity results in minimal adverse effect on the aquatic environment.

8. **Riprap.** For all NWP's that allow for the use of riprap material for bank stabilization, the following conditions shall be applied:

- a. Filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters. The placement of filter fabric is not required if the riprap will be pushed or "keyed" into the bank of the waterbody. A waiver from the specifications in this Regional Condition must be requested in writing.
- b. Riprap shall be placed only on the stream banks, or, if it is necessary to be placed in the stream bed, the finished top elevation of the riprap should not exceed that of the original stream bed.

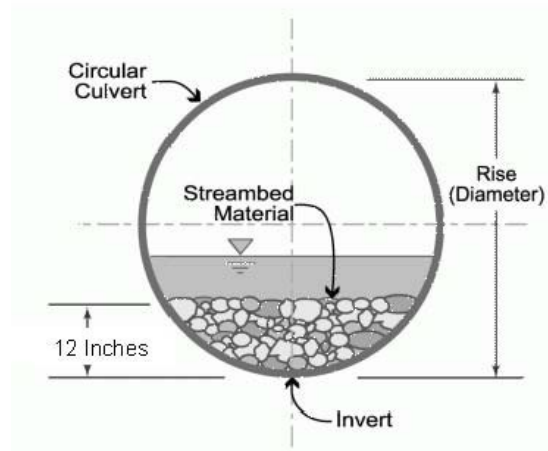
9. **Culvert Placement.** For all NWP's that allow for culvert placement, the following conditions shall be applied:

- a. For all NWP's that involve the construction/installation of culverts, measures shall be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms

Placement of culverts and other structures in streams shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20% of the culvert diameter for culverts having a diameter less than or equal to 48 inches. If the culvert outlet is submerged within a pool or scour hole and designed to provide for aquatic passage, then culvert burial into the streambed is not required.

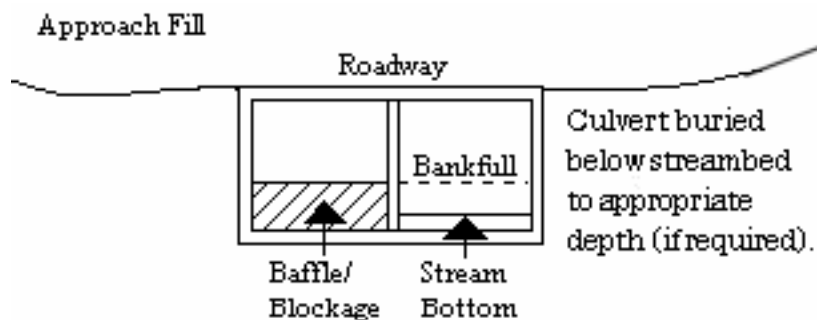
Culvert burial is not required for structures less than 72 inch diameter/width, where the slope of the culvert will be greater than 2.5%, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g., rock ladders, cross vanes, sills, baffles etc.). Culvert burial is not required when bedrock is present in culvert locations.

Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.



A waiver from the depth specifications in this condition may be requested, in writing, by the permittee and issued by the Corp. This waiver request must be specific as to the reasons(s) for the request. The waiver will be issued if it can be demonstrated that the proposed design would result in less impacts to the aquatic environment. Culverts placed across wetland fills purely for the purposes of equalizing surface water do not have to be buried, but the culverts must be of adequate size and/or number to ensure unrestricted transmission of water.

b. Bank-full flows (or less) shall be accommodated through maintenance of the existing bank-full channel cross sectional area. Additional culverts or culvert barrels at such crossings shall be allowed only to receive bank-full flows.



c. Culverts shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. If the width of the culvert is wider than the stream channel, the culvert shall include multiple boxes/pipes, baffles, benches and/or sills to maintain the natural width of the stream channel. If multiple culverts/pipes/barrels are used, low flows shall be accommodated in one culvert/pipe and additional culverts/pipes shall be installed such that they receive only flows above bankfull.

10. **Utility Lines.** For all NWP's that allow for the construction and installation of utility lines, the following conditions shall be applied:

a. Utility lines consisting of aerial electric power transmission lines crossing navigable waters of the U.S. (which are defined at 33 CFR part 329) must comply with the applicable minimum clearances specified in 33 CFR 322.5(i).

b. The work area authorized by this permit, including temporary and/or permanent fills, will be minimized to the greatest extent practicable. Justification for work corridors exceeding forty (40) feet in width is required and will be based on pipeline diameter and length, size of equipment required to construct the utility line, and other construction information deemed necessary to support the request. The permittee is required to provide this information to the Corps with the initial PCN package.

c. A plan to restore and re-vegetate wetland areas cleared for construction must be submitted with the required PCN. Cleared wetland areas shall be re-vegetated, as appropriate, with species of canopy, shrub, and herbaceous species. The permittee shall not use fescue grass or any other species identified as invasive or exotic species by the NC Native Plant Society (NCNPS): <https://ncwildflower.org/invasive-exotic-species-list/>.

d. Any permanently maintained corridor along the utility right of way within forested wetlands shall be considered a loss of aquatic function. A compensatory mitigation plan will be required for all such impacts associated with the requested activity if the activity requires a PCN and the cumulative total of permanent conversion of forested wetlands exceeds 0.1 acres, unless the District Engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal.

Where permanently maintained corridor within forested wetlands is 0.1 acres or less, the District Engineer may determine, on a case-by-case basis, that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment.

e. When directional boring or horizontal directional drilling (HDD) under waters of the U.S., including wetlands, permittees shall closely monitor the project for hydraulic fracturing or “fracking.” Any discharge from hydraulic fracturing or “fracking” into waters of the U.S., including wetlands, shall be reported to the appropriate Corps Regulatory Field Office within 48 hours. Restoration and/or compensatory mitigation may be required as a result of any unintended discharges.

11. **Temporary Access Fills.** The permittee shall submit a PCN to the District Engineer prior to commencing the activity if the activity will involve the discharge of dredged or fill material into more than 0.1 acres of wetlands or 0.02 acres of stream channel for the construction of temporary access fills and/or temporary road crossings. The PCN must include a restoration plan that thoroughly describes how all temporary fills will be removed, how pre-project conditions will be restored, and include a timetable for all restoration activities.

12. **Federal Navigation Channel Setbacks.** Authorized structures and fills located in or adjacent to Federally authorized waterways must be constructed in accordance with the latest setback criteria established by the Wilmington District Engineer. You may review the setback policy at <http://www.saw.usace.army.mil/Missions/Navigation/Setbacks.aspx>. This general permit does not authorize the construction of hardened or permanently fixed structures within the Federally Authorized Channel Setback, unless the activity is approved by the Corps. The permittee shall submit a PCN (see General Condition 32) to the District Engineer to obtain a written verification prior to the construction of any structures or fills within the Federally Authorized Channel Setback.

13. **Northern Long-eared Bat – Endangered Species Act Compliance.** The Wilmington District, U.S. Army Corps of Engineers has consulted with the United States Fish and Wildlife

Service (USFWS) in regard to the threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*) and Standard Local Operating Procedures for Endangered Species (SLOPES) have been approved by the Corps and the USFWS. This condition concerns effects to the NLEB only and does not address effects to other federally listed species and/or federally designated critical habitat.

a. Procedures when the Corps is the lead federal* agency for a project:

The permittee must comply with (1) and (2) below when:

- the project is located in the western 41 counties of North Carolina, to include non-federal aid North Carolina Department of Transportation (NCDOT) projects, OR;
- the project is located in the 59 eastern counties of North Carolina and is a non-NCDOT project.

*Generally, if a project is located on private property or on non-federal land, and the project is not being funded by a federal entity, the Corps will be the lead federal agency due to the requirement to obtain Department of the Army authorization to impact waters of the U.S. If the project is located on federal land, contact the Corps to determine the lead federal agency.

(1) A permittee using an NWP must check to see if their project is located in the range of the NLEB by using the following website:

<http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf>. If the project is within the range of the NLEB, or if the project includes percussive activities (e.g., blasting, pile driving, etc.), the permittee is then required to check the appropriate website in the paragraph below to discover if their project:

- is located in a 12-digit Hydrologic Unit Code area ("red HUC" - shown as red areas on the map), AND/OR;
- involves percussive activities within 0.25 mile of a red HUC.

Red HUC maps - for the western 41 counties in NC (covered by the Asheville Ecological Services Field Office), check the project location against the electronic maps found at: http://www.fws.gov/asheville/htmls/project_review/NLEB_in_WNC.html. For the eastern 59 counties in NC (covered by the Raleigh Ecological Services Field Office), check the project location against the electronic maps found at: https://www.fws.gov/raleigh/NLEB_RFO.html.

(2) A permittee must submit a PCN to the District Engineer, and receive written verification from the District Engineer, prior to commencing the activity, if the activity will involve any of the following:

- tree clearing/removal and/or, construction/installation of wind turbines in a red HUC, AND/OR;
- bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, (applies anywhere in the range of the NLEB), AND/OR;
- percussive activities in a red HUC, or within 0.25 mile of a red HUC.

The permittee may proceed with the activity without submitting a PCN to either the Corps or the USFWS, provided the activity complies with all applicable NWP terms and general and regional conditions, if the permittee's review under A.(1) and A.(2) above shows that the project is:

- located outside of a red HUC (and there are no percussive activities), and the activity will NOT include bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, OR;
- located outside of a red HUC and there are percussive activities, but the percussive activities will not occur within 0.25-mile of a red HUC boundary, and the activity will NOT include bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, OR;
- located in a red HUC, but the activity will NOT include tree clearing/removal; construction/installation of wind turbines; bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, and/or; any percussive activities.

b. Procedures when the USACE is not the lead federal agency:

For projects where another federal agency is the lead federal agency - if that other federal agency has completed project-specific ESA Section 7(a)(2) consultation for the NLEB, and has (1) determined that the project would not cause prohibited incidental take of the NLEB, and (2) completed coordination/consultation that is required by the USFWS (per the directions on the respective USFWS office's website), that project may proceed without PCN to either the USACE or the USFWS, provided all General and Regional Permit Conditions are met.

The NLEB SLOPES can be viewed on the USACE website at:

<http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/ESA/>. Permittees who do not have internet access may contact the USACE at (910) 251- 4633.

14. **West Indian Manatee Protection.** In order to protect the endangered West Indian manatee (*Trichechus manatus*) the Permittee shall implement the USFWS' Manatee Guidelines, and strictly adhere to all requirements therein. The guidelines can be found at <https://www.fws.gov/raleigh/pdfs/ManateeGuidelines2017.pdf>.

15. **ESA Programmatic Biological Opinions.** The Wilmington District, USFWS, NCDOT, and the FHWA have conducted programmatic Section 7(a)(2) consultation for a number of federally listed species and designated critical habitat (DCH), and programmatic consultation concerning other federally listed species and/or DCH may occur in the future. The result of completed programmatic consultation is a Programmatic Biological Opinion (PBO) issued by the USFWS. These PBOs contain mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" of whichever species or critical habitat is covered by a specific PBO. Authorization under NWPs is conditional upon the permittee's compliance with all the mandatory terms and conditions associated with incidental take of the applicable PBO (or PBOs), which are incorporated by reference in the NWPs. Failure to comply with the terms and conditions associated with incidental take of an applicable PBO, where a take of the federally listed species occurs, would constitute an unauthorized take by the permittee, and would also constitute permittee non-compliance with the authorization under the NWPs. If the terms and conditions of a specific PBO (or PBOs) apply to a project, the Corps will include this/these requirements in any NWP verification that may be issued for a project. For an activity/project that does not require a PCN, the terms and conditions of the applicable PBO(s) also apply to that non-notifying

activity/project. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its PBO and the ESA. All PBOs can be found on our website at: <https://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/ESA/>.

16. Work on Eastern Band of Cherokee Indian Land.

Notifying NWPs - All PCNs submitted for activities in waters of the U.S. on Eastern Band of Cherokee Indians (EBCI) trust land (i.e., Qualla Boundary and non-contiguous tracts of trust land located in portions of Swain, Jackson, Haywood, Graham and Cherokee Counties), must comply with the requirements of the latest MOU between the Wilmington District and the EBCI.

Non-notifying NWPs - Prior to the use of any non-notifying NWP for activities in waters of the U.S. on EBCI trust land (i.e., Qualla Boundary and non-contiguous tracts of trust land located in portions of Swain, Jackson, Haywood, Graham and Cherokee Counties), all prospective permittees must comply with the requirements of the latest MOU between the Wilmington District and the EBCI; this includes coordinating the proposed project with the EBCI Natural Resources Program and obtaining a Tribal Approval Letter from the Tribe.

The EBCI MOU can be found at the following URL: <http://saw-reg.usace.army.mil/FO/Final-MOU-EBCI-USACE.pdf>

17. Sedimentation and Erosion Control Structures and Measures.

All PCNs will identify and describe sedimentation and erosion control structures and measures proposed for placement in waters of the U.S. The structures and measures should be depicted on maps, surveys or drawings showing location and impacts to jurisdictional wetlands and streams.

C. REGIONAL CONDITIONS APPLICABLE TO NWP 18

1. In designated trout waters (see Regional Condition C.3. above), a PCN is not required if 1) the quantity of discharged material is less than or equal to 10 cubic yards below the plane of the ordinary high water mark; 2) temporary impacts to streams or waterbodies associated with dewatering to work in dry conditions are 0.02 acres or less; and 3) the activity will be constructed outside of the trout waters moratorium (October 15 through April 15).

D. SECTION 401 WATER QUALITY CERTIFICATION (WQC) AND/OR COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY DETERMINATION SUMMARY AND APPLICABLE CONDITIONS

The CZMA Consistency Determination and all Water Quality Certifications for the NWPs can be found at: <https://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Permits/2017-Nationwide-Permits/>

**STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES**

WATER QUALITY GENERAL CERTIFICATION NO. 4249

**GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR US ARMY CORPS OF ENGINEERS
NATIONWIDE PERMIT NUMBER 18 (MINOR DISCHARGES)**

Water Quality General Certification Number 4249 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Regulations in 15A NCAC 02H .0500 and 15A NCAC 02B .0200 for the discharge of fill material to surface waters and wetland areas as described in 33 CFR 330 Appendix A (B) (18) of the US Army Corps of Engineers regulations.

The State of North Carolina certifies that the specified category of activity will comply with water quality requirements and applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Effective date: February 25, 2022

Signed this day: December 18, 2020

By



S. Daniel Smith
Director

GENERAL CERTIFICATION COVERAGE:

Activities that are eligible for US Army Corps of Engineers Nationwide Permit 18 qualify for coverage under this General Certification unless they meet one of the thresholds listed below. Activities meeting any one (1) of the thresholds or circumstances listed below are not eligible for coverage under this General Certification and require an Individual 401 Water Quality Certification from the Division of Water Resources (DWR):

- a) If any of the conditions of this General Certification cannot be met; or
- b) Total temporary and permanent impacts to streams greater than 150 feet; or
- c) Total temporary and permanent impacts to wetlands or open waters equal to or greater than one-tenth (1/10) acre; or
- d) Any impacts to streams from excavation or dredging other than excavation that is conducted as preparation for installing permanent fill or structures; or
- e) Any stream restoration or relocation other than stream relocations that are conducted for the purpose of proper culvert installation, alignment, protection, repair or maintenance where the relocation length is equal to or less than 50 feet in length and the relocated stream is designed and installed based on current natural channel techniques; or
- f) Complete dewatering and drawdowns to a sediment layer related to pond/dam maintenance or removal unless the dewatering activity has been designed to ensure no discharge of sediment will occur into downstream waters AND has been covered by a Sediment and Erosion Control Plan Approval from the Division of Energy, Mineral, and Land Resources (DEMLR) or a delegated local program; or
- g) Any high-density project, as defined in 15A NCAC 02H .1003(3) and by the density thresholds specified in 15A NCAC 02H .1017, which:
 - i. Disturbs one acre or more of land (including a project that disturbs less than one acre of land that is part of a larger common plan of development or sale); and
 - ii. Has permanent wetland, stream or open water impacts; and
 - iii. Is proposing new built-upon area; and
 - iv. Does not have a stormwater management plan reviewed and approved under a state stormwater program¹ or a state-approved local government stormwater program².

Projects that have vested rights, exemptions, or other legacy rights or exemptions from state or locally-implemented stormwater programs and projects that satisfy state or locally-implemented stormwater programs through use of community in-lieu fee programs **require an Individual 401 Certification**; or

- h) Any permanent impacts to waters, or to wetlands adjacent to waters, designated as: ORW (including SAV), HQW (including PNA), SA, WS-I, WS-II, Trout, or North Carolina or National Wild and Scenic River; or
- i) Any permanent impacts to coastal wetlands [15A NCAC 07H .0205], or Unique Wetlands (UWL) [15A NCAC 02B .0231]; or

¹ e.g. Coastal Counties, HQW, ORW, or state-implemented Phase II NPDES

² e.g. Delegated Phase II NPDES, Water Supply Watershed, Nutrient-Sensitive Waters, or Universal Stormwater Management Program

GC4249

- j) Any impacts to subject water bodies and/or state regulated riparian buffers along subject water bodies in the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman Lake, Jordan Lake or Goose Creek Watersheds (or any other basin or watershed with State Regulated Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) *unless*:
- i. The activities are listed as “EXEMPT” or “DEEMED ALLOWABLE” from these rules; or
 - ii. A Buffer Authorization Certificate is issued by the NC Division of Coastal Management (DCM); or
 - iii. A Buffer Authorization Certificate, Certificate with Exception, or Minor Variance is issued by a delegated or designated local government implementing a state riparian buffer program pursuant to 143-215.23.

In accordance with 15A NCAC 02H .0503(f), the Director of the North Carolina Division of Water Resources may require submission of a formal application for Individual Certification for any project if it is deemed in the public’s best interest or determined that the project is likely to have a significant adverse effect upon water quality, including state or federally listed endangered or threatened aquatic species, or will degrade the waters so that existing uses of the waters or downstream waters are precluded.

This General Certification does not relieve the permittee of the responsibility to obtain all other required Federal, State, or Local approvals before proceeding with the project, including those required by, but not limited to, Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, and Trout Buffer regulations.

This General Certification neither grants nor affirms any property right, license, or privilege in any waters, or any right of use in any waters. This General Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and does not create any prescriptive right or any right of priority regarding any usage of water. This General Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this General Certification to possess any prescriptive or other right of priority with respect to any other consumptive user regardless of the quantity of the withdrawal or the date on which the withdrawal was initiated or expanded.

Upon the presentation of proper credentials, DWR may inspect the property.

This General Certification shall expire on the same day as the expiration date of the corresponding Nationwide Permit. The conditions in effect on the date of issuance of Certification for a specific project shall remain in effect for the life of the project, regardless of the expiration date of this General Certification. This General Certification is rescinded when the US Army Corps of Engineers reauthorizes the corresponding Nationwide Permit or when deemed appropriate by the Director of the Division of Water Resources.

Non-compliance with or violation of the conditions herein set forth by a specific project may result in revocation of this General Certification for the project and may also result in criminal and/or civil penalties.

I. ACTIVITY SPECIFIC CONDITIONS:

1. If this Water Quality Certification is used to access residential, commercial or industrial building sites, then all parcels owned by the permittee that are part of the single and complete project authorized by this Certification must be buildable without additional impacts to streams or wetlands.

Citation: 15A NCAC 02H .0502(a);15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

2. For road construction purposes, this Certification shall only be utilized from natural high ground to natural high ground.

Citation: 15A NCAC 02H .0502(a);15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

3. Deed notifications or similar mechanisms shall be placed on all lots/parcels with retained jurisdictional wetlands, waters, and state regulated riparian buffers within the project boundaries in order to assure compliance with NC Water Quality Certification Rules (15A NCAC 02H .0500), NC Isolated Wetland Rules (15A NCAC 02H .1300), and/or State Regulated Riparian Buffer Rules (15A NCAC 02B .0200). These mechanisms shall be put in place at the time of recording of the property or individual parcels, whichever is appropriate.

Citation: 15A NCAC 02H .0502(a);15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

4. For all dam removal projects meeting the definition under G.S. 143-215.25 and requirements under G.S. 143-215.27 of a professionally supervised dam removal, the applicant shall provide documentation that any sediment that may be released has similar or lower level of contamination than sediment sampled from downstream of the dam in accordance with Session Law 2017-145.

Citation: 15A NCAC 02H .0502; 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC02B .0200; S.L. 2017-145;

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

5. If this Water Quality Certification is used for utility related impacts, then the following Activity Specific Conditions shall apply to those impacts.
 - a. All sewer lines shall be designed, constructed and maintained in accordance with Title 15A NCAC Chapter 02T, applicable Minimum Design Criteria (MDC), and/or Alternative Design Criteria.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: The referenced Minimum Design criteria and 02T rules were adopted to ensure that conditions of waters be suitable for all best uses provided for in state rule (including, at minimum: aquatic life propagation, survival, and maintenance of biological integrity; wildlife: secondary contact recreation: agriculture); and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis.

6. Any utility construction corridor that is parallel to a stream or open water shall not be closer than 10 feet to the top of bank or ordinary high-water mark.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

7. Where there are temporary or permanent impacts from stream crossings, utility lines shall cross the stream channel at a near-perpendicular direction (i.e., between 75 degrees and 105 degrees to the stream bank).

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed

activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

8. Construction corridors in wetlands and/or across stream channels shall be minimized to the maximum extent practicable and shall not exceed 40 feet wide for utility lines.

For construction corridors in wetlands and across stream channels, stumps shall be grubbed only as needed to install the utility and remaining stumps shall be cut off at grade level. The general stripping of topsoil within wetlands along the construction corridor is prohibited.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

9. Permanent maintained access corridors in wetlands and across stream channels shall be restricted to the minimum width practicable and shall not exceed 30 feet wide except at manhole locations.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

10. For all utility lines constructed within wetlands, an anti-seep collar shall be placed at the downstream (utility line gradient) wetland boundary and every 150 feet up the gradient until the utility exits the wetland. Anti-seep collars may be constructed with class B concrete, compacted clay, PVC pipe, or metal collars. Wetland crossings that are directionally drilled, and perpendicular wetland crossings that are open cut and less than 150 feet long do not require anti-seep collars. The compacted clay shall have a specific infiltration of 1×10^{-5} cm/sec or less. A section and plan view diagram is attached for the anti-seep collars.

The following specifications shall apply to class B concrete:

- i. Minimum cement content, sacks per cubic yard with rounded coarse aggregate 5.0
- ii. Minimum cement content, sacks per cubic yard with angular coarse aggregate 5.5
- iii. Maximum water-cement ratio gallons per sack 6.8
- iv. Slump range 2" to 4"
- v. Minimum strength - 28-day psi 2,500

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

11. The permittee shall have a specific plan for restoring wetland contours to pre-construction conditions. Any excess material will be removed to a high ground disposal area.

The mixing of topsoil and subsoils within the wetlands along utility corridors shall be minimized to the greatest extent practical. During excavation, the soils shall be placed on fabric to minimize impacts whenever possible. Topsoil excavated from utility trenches will be piled separately from subsoils and will be backfilled into the trench only after the subsoils have been placed and compacted.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

II. GENERAL CONDITIONS:

1. The permittee shall report to the DWR Regional Office any noncompliance with, and/or any violation of, stream or wetland standards [15A NCAC 02B .0200], including but not limited to sediment impacts to streams or wetlands. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the permittee became aware of the non-compliance circumstances.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Timely reporting of non-compliance is important in identifying and minimizing detrimental impacts to water quality and avoiding impacts due to water pollution that precludes any best use on a short-term or long-term basis.

2. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the impacts (including temporary impacts); or beyond the thresholds established for use of this General Certification and Nationwide Permit.

Citation: 15A NCAC 02H .0506; 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule (including, at minimum: aquatic life propagation,

survival, and maintenance of biological integrity; wildlife; secondary contact recreation; agriculture); and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis.

3. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2B of Title 15A in the North Carolina Administrative Code.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: The referenced Riparian Buffer rules were adopted to address water quality impairments and further protect existing uses.

4. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur.

Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *North Carolina Department of Transportation Sediment and Erosion Control Manual*.

All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality Waters (HQW), or Outstanding Resource Waters (ORW), then the sedimentation and erosion control designs shall comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watersheds*.

Citation: 15A NCAC 02H .0506(b)(2); 15A NCAC 02H .0507(c); 15A NCAC02B .0200; 15A NCAC 02B .0231

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (2) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters

for any designated uses; and (12) turbidity in the receiving water shall not exceed 50 Nephelometric Turbidity Units (NTU) in streams not designated as trout waters and 10 NTU in streams, lakes, or reservoirs designated as trout waters; for lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTU; if turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased. As cited in Wetland Standards: (1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

5. Sediment and erosion control measures shall not be installed in wetland or waters except within the footprint of temporary or permanent impacts otherwise authorized by this Certification. If placed within authorized impact areas, then placement of such measures shall not be conducted in a manner that results in dis-equilibrium of any wetlands, streambeds, or streambanks. Any silt fence installed within wetlands shall be removed from wetlands and the natural grade restored within two (2) months of the date that DEMLR or locally delegated program has released the specific area within the project to ensure wetland standards are maintained upon completion of the project.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC02B .0200; 15A NCAC 02B .0231

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (2) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses; and (12) turbidity in the receiving water shall not exceed 50 Nephelometric Turbidity Units (NTU) in streams not designated as trout waters and 10 NTU in streams, lakes, or reservoirs designated as trout waters; for lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTU; if turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased. As cited in Wetland Standards: (1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

6. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses (including aquatic life propagation and biological integrity), and the water quality to protect such uses, are protected. Protections are necessary to ensure any remaining surface waters or wetlands, and any surface waters or wetlands downstream, continue to support existing uses

during and after project completion. The Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards, or would result in secondary or cumulative impacts.

7. If the project is covered by NPDES Construction Stormwater Permit Number NCG010000 or NPDES Construction Stormwater Permit Number NCG250000, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required.

The North Carolina Department of Transportation (NCDOT) shall be required to be in full compliance with the conditions related to construction activities within the most recent version of their Individual NPDES Stormwater Permit Number NCS000250.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (2) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses; and (12) turbidity in the receiving water shall not exceed 50 Nephelometric Turbidity Units (NTU) in streams not designated as trout waters and 10 NTU in streams, lakes, or reservoirs designated as trout waters; for lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTU; if turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased. As cited in Wetland Standards: (1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

8. All work in or adjacent to streams shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the *NC Sediment and Erosion Control Manual*, or the *NC Department of Transportation Construction and Maintenance Activities Manual*, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (2) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses; and (12) turbidity in the receiving water shall not exceed 50 Nephelometric

Turbidity Units (NTU) in streams not designated as trout waters and 10 NTU in streams, lakes, or reservoirs designated as trout waters; for lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTU; if turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased.

9. If activities must occur during periods of high biological activity (e.g. sea turtle nesting, fish spawning, or bird nesting), then biological monitoring may be required at the request of other state or federal agencies and coordinated with these activities.

All moratoriums on construction activities established by the NC Wildlife Resources Commission (WRC), US Fish and Wildlife Service (USFWS), NC Division of Marine Fisheries (DMF), or National Marine Fisheries Service (NMFS) shall be implemented. Exceptions to this condition require written approval by the resource agency responsible for the given moratorium.

Work within a designated trout watershed of North Carolina (as identified by the Wilmington District of the US Army Corps of Engineers), or identified state or federal endangered or threatened species habitat, shall be coordinated with the appropriate WRC, USFWS, NMFS, and/or DMF personnel.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 04B .0125

Justification: In order to protect against impairment of water quality standards and best usage of receiving and downstream waters, water quality based management practices must be employed to protect against direct or indirect discharge of waste or other sources of water pollution. Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule (including, at minimum: aquatic life propagation, survival, and maintenance of biological integrity, wildlife, secondary contact recreation, agriculture), and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis.

10. In-stream structures installed to mimic natural channel geomorphology such as cross-vanes, sills, step-pool structures, etc. shall be designed and installed in such a manner that allow for continued aquatic life movement.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. Ensuring that in-stream structures are installed properly will ensure that surface water quality standards are met and conditions of waters are suitable for all best uses.

11. Culverts shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert shall be such as to

pass the average historical low flow and spring flow without adversely altering flow velocity. If the width of the culvert is wider than the stream channel, the culvert shall include multiple boxes/pipes, baffles, benches and/or sills to maintain the natural width of the stream channel. If multiple culverts/pipes/barrels are used, low flows shall be accommodated in one culvert/pipe and additional culverts/pipes shall be installed such that they receive only flows above bankfull.

Placement of culverts and other structures in streams shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20% of the culvert diameter for culverts having a diameter less than or equal to 48 inches, to allow low flow passage of water and aquatic life. If the culvert outlet is submerged within a pool or scour hole and designed to provide for aquatic passage, then culvert burial into the streambed is not required.

For structures less than 72" in diameter/width, and topographic constraints indicate culvert slopes of greater than 2.5% culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g. rock ladders, cross-vanes, sills, baffles etc.). Notification, including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations, shall be provided to DWR 30 calendar days prior to the installation of the culvert.

When bedrock is present in culvert locations, culvert burial is not required, provided that there is sufficient documentation of the presence of bedrock. Notification, including supporting documentation such as a location map of the culvert, geotechnical reports, photographs, etc. shall be provided to DWR a minimum of 30 calendar days prior to the installation of the culvert. If bedrock is discovered during construction, then DWR shall be notified by phone or email within 24 hours of discovery.

Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native woody vegetation and other soft stream bank stabilization techniques shall be used where practicable instead of rip-rap or other bank hardening methods.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. Ensuring that in-stream structures are installed properly will ensure that surface water quality standards are met and conditions of waters are suitable for all best uses.

12. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means to the maximum extent practicable (e.g. grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. Ensuring that in-stream structures are installed properly will ensure that surface water quality standards are met and conditions of waters are suitable for all best uses.

13. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters.

Citation: 15A 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0231

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (2) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses.

14. If concrete is used during construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state.

Citation: 15A 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (2) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses.

15. All proposed and approved temporary fill and culverts shall be removed and the impacted area shall be returned to natural conditions within 60 calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross-sectional dimensions, planform pattern, and longitudinal bed profile. All temporarily impacted sites shall be restored and stabilized with native vegetation.

Citation: 15A NCAC 02H.0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Protections are necessary to ensure any remaining surface waters or wetlands, and any surface waters or wetlands downstream, continue to support existing uses after project completion.

16. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams shall be installed as outlined in the most recent edition of the *North Carolina Sediment and Erosion Control Planning and Design Manual* or the *North Carolina Surface Mining Manual* or the *North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities* so as not to restrict stream flow or cause dis-equilibrium during use of this General Certification.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. Ensuring that in-stream structures are installed properly will ensure that surface water quality standards are met and conditions of waters are suitable for all best uses.

17. Any rip-rap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall be placed such that the original streambed elevation and streambank contours are restored and maintained and shall consist of clean rock or masonry material free of debris or toxic pollutants. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or be installed in a manner that precludes aquatic life passage.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. The Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards, or would result in secondary or cumulative impacts.

18. Any rip-rap used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows, and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0201

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. The Division must evaluate if the

activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards, or would result in secondary or cumulative impacts.

19. Rip-rap groins proposed in accordance with 15A NCAC 07H .1401 (NC Division of Coastal Management General Permit for construction of Wooden and Rip-rap Groins in Estuarine and Public Trust Waters) shall meet all the specific conditions for design and construction specified in 15A NCAC 07H .1405.

Citation: 15A NCAC 02H .0507(c); 15A NCAC 07H .1400 et seq.

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. The Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards, or would result in secondary or cumulative impacts.

20. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication, and general equipment maintenance shall be performed in a manner to prevent, to the maximum extent practicable, contamination of surface waters by fuels and oils.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (2) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses.

21. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance and compaction.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0231

Justification: Wetland standards require maintenance or enhancement of existing uses of wetlands such that hydrologic conditions necessary to support natural biological and physical characteristics are protected; populations of wetland flora and fauna are maintained to protect biological integrity of the wetland; and materials or substances are not present in amounts that may cause adverse impact on existing wetland uses.

22. In accordance with 143-215.85(b), the permittee shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours.

Citation: 15A NCAC 02H .0507(c); N.C.G.S 143-215.85(b)

GC4249

Justification: Person(s) owning or having control over oil or other substances upon notice of discharge must immediately notify the Department, or any of its agents or employees, of the nature, location, and time of the discharge and of the measures which are being taken or are proposed to be taken to contain and remove the discharge. This action is required in order to contain or divert the substances to prevent entry into the surface waters. Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule (including, at minimum: aquatic life propagation, survival, and maintenance of biological integrity; wildlife; secondary contact recreation; agriculture); and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis.

23. The permittee and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

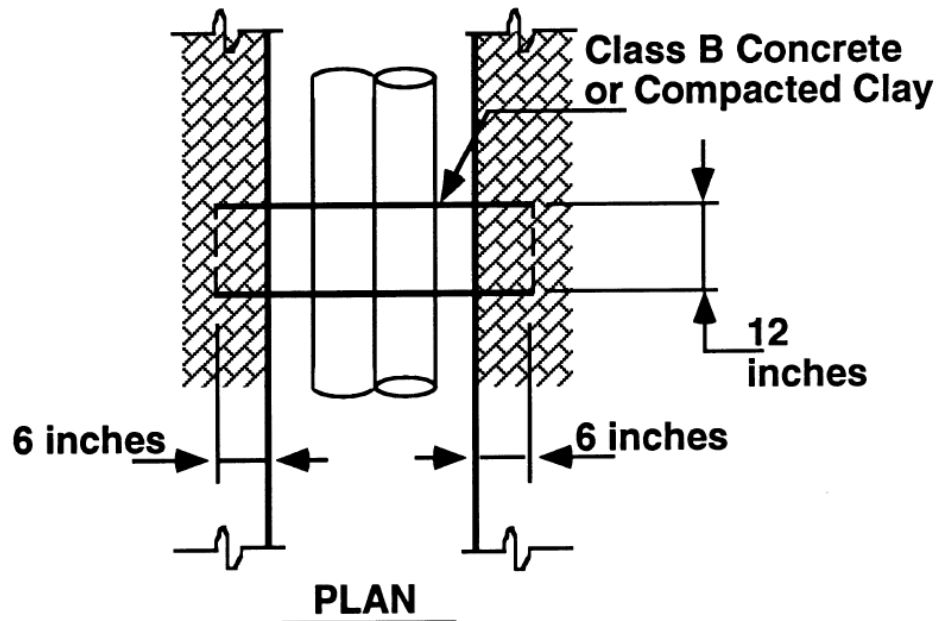
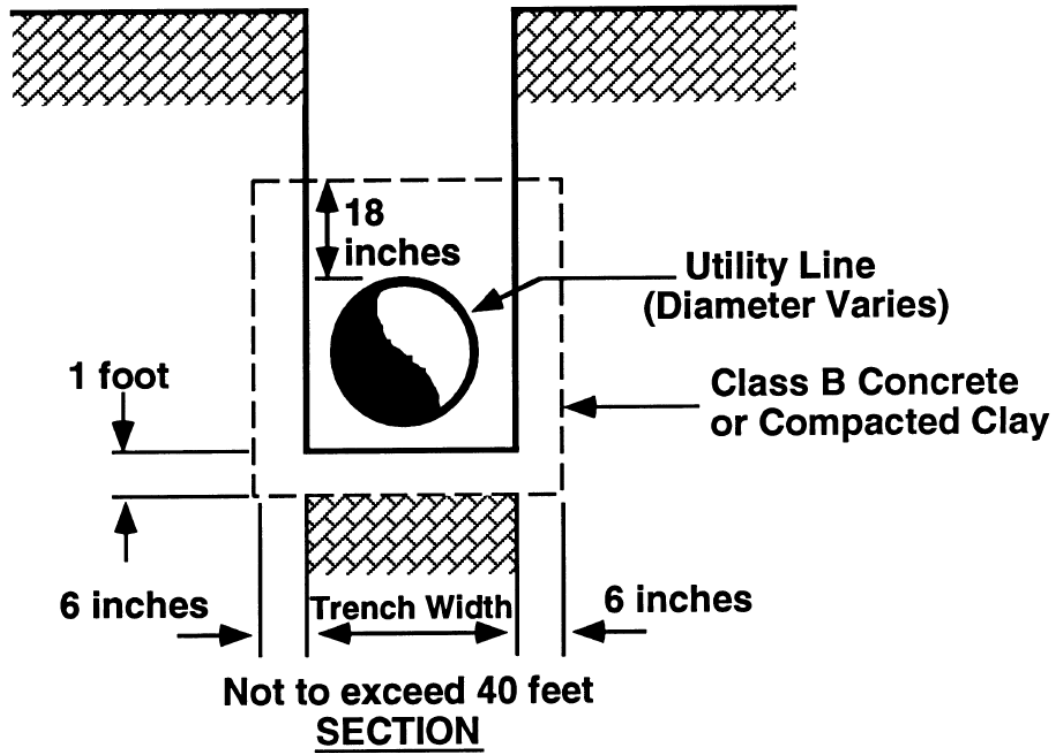
Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. The Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards, or would result in secondary or cumulative impacts.

24. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this General Certification. A copy of this General Certification shall be available at the project site during the construction and maintenance of this project.

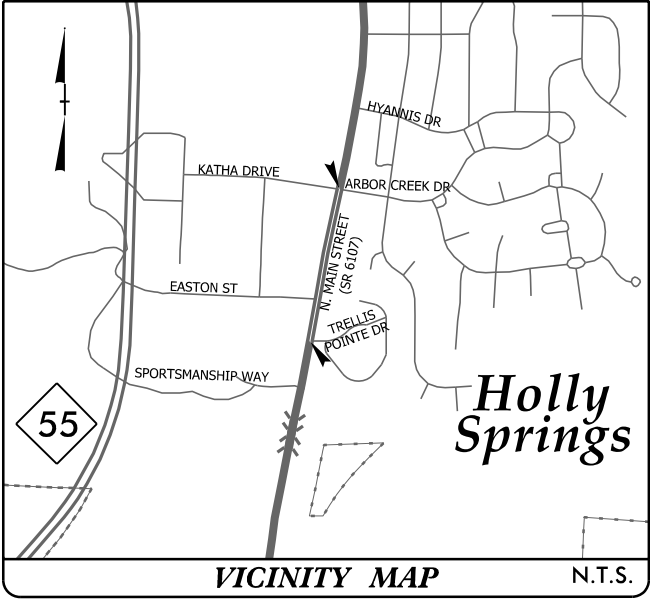
Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Those actually performing the work should be aware of the requirements of this 401 Water Quality General Certification to minimize water quality impacts.

History Note: Water Quality Certification (WQC) Number 4249 issued December 18, 2020 replaces WQC 4139 issued December 1, 2017 for activities eligible for USACE NWP18; WQC 4092 issued March 3, 2017; WQC 3890 issued March 19, 2012; WQC 3821 issued April 6, 2010; WQC 3631 issued March 19, 2007; WQC 3402 issued March 28, 2003; WQC 3362 issued March 18, 2002; WQC 3287 issued June 1, 2000; WQCs 3106 and 3108 issued February 11, 1997.

ANTI-SEEP COLLAR

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	22385	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	



TOWN OF HOLLY SPRINGS

WAKE COUNTY

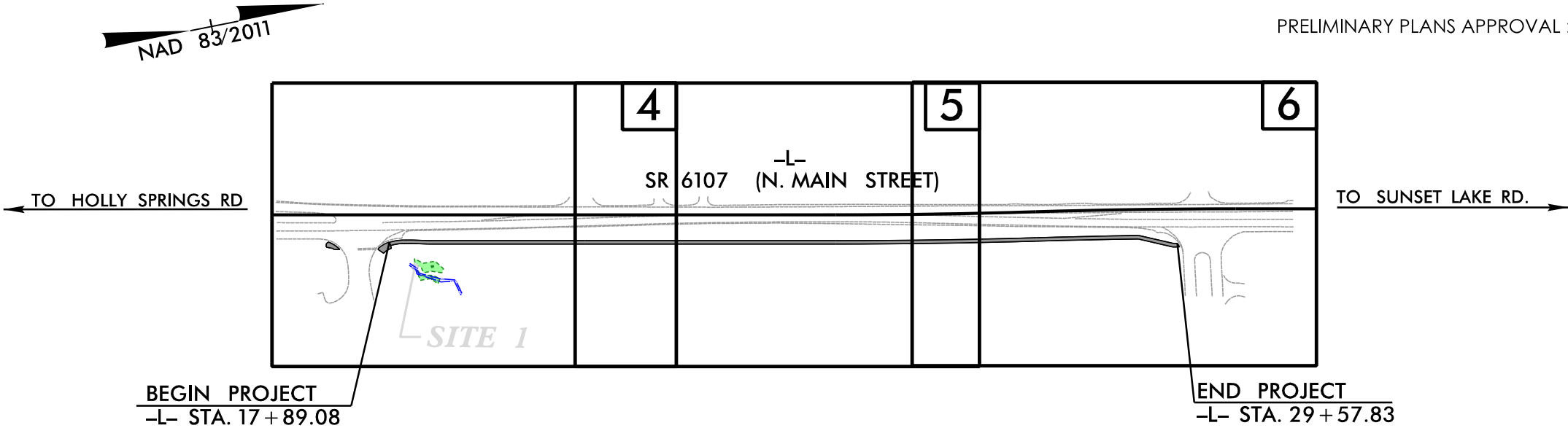
LOCATION: SR 6107 (N. MAIN STREET) FROM TRELLIS POINTE DRIVE
TO ARBOR CREEK DRIVE
HOLLY SPRINGS, NORTH CAROLINA

TYPE OF WORK: GRADING, DRAINAGE, AND SIDEWALK

WETLAND AND SURFACE WATER
IMPACTS PERMIT

I certify that these plans were prepared and that this project shall be constructed in accordance with the following plans, the latest edition of the Engineering Design and Construction Standards of the Town of Holly Springs and other applicable Town ordinances and policies. The Engineer whose seal and signature appear below certifies that the Town of Holly Springs Engineering Design and Construction Standards have been thoroughly reviewed for applicability to this particular project.

PRELIMINARY PLANS APPROVAL : 2/5/2024

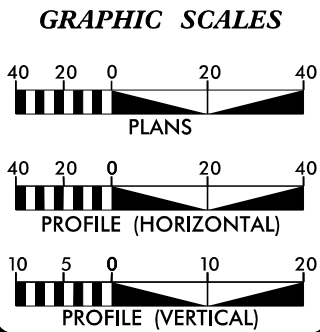


PERMIT DRAWING
SHEET 1 OF 5

MAYOR - SEAN MAYEKSIE
TOWN MANAGER - RANDY HARRINGTON

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ALL CONSTRUCTION SHALL CONFORM TO TOWN OF HOLLY SPRINGS
ENGINEERING DESIGN AND CONSTRUCTION STANDARDS.



DESIGN DATA

ADT 2021 = 14,500

DESIGN SPEED = 50 MPH

PROJECT LENGTH

-L- LENGTH OF ROADWAY = 0.222 MILES

TOWN OF HOLLY SPRINGS CONTACT

TIM ATHY, P.E.

Prepared In the Office of:

RK&K

8601 SIX FORKS ROAD, FORUM 1, SUITE 700
RALEIGH, NORTH CAROLINA 27615-3960
NC LICENSE NO. F-0112
1-888-921-4455 OR 919-878-9560

FOR

TOWN OF HOLLY SPRINGS

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FEBRUARY 20, 2024

LETTING DATE:

JEFF MEADOR, P.E.
PROJECT ENGINEER

JILLIAN HINSON, E.I.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

SIGNATURE: P.E.

CONTRACT: 22385

5/14/99
4/5/2024
ulics\PERMIT\Environmental\Drawings\22385_Hyd.psh04.dgn

PERMIT DRAWING
SHEET 2 OF 5



ENGLISH

20 0 20 40

SCALE

40 0 40 80

SCALE FOR INSET

S S

TS TS

F F

T T

S S

TS TS

F F

T T

8

8

8

8

8

8

8

8

SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

FILL IN WETLAND

TEMPORARY FILL IN WETLAND

INSET A

PROJECT REFERENCE NO.	SHEET NO.
22385	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE -L- STA. 21+00
SEE SHEET 5



P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. E-0112

Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

5/14/99
4/15/2024
C:\PERMITS\Environmental\Drawings\22385_Hyd_psh04_con.dgn

PERMIT DRAWING
SHEET 3 OF 5

20 0 20 40 40 0 40 80
SCALE
SCALE FOR INSET

S

8

TS

TS

F

F

T

T

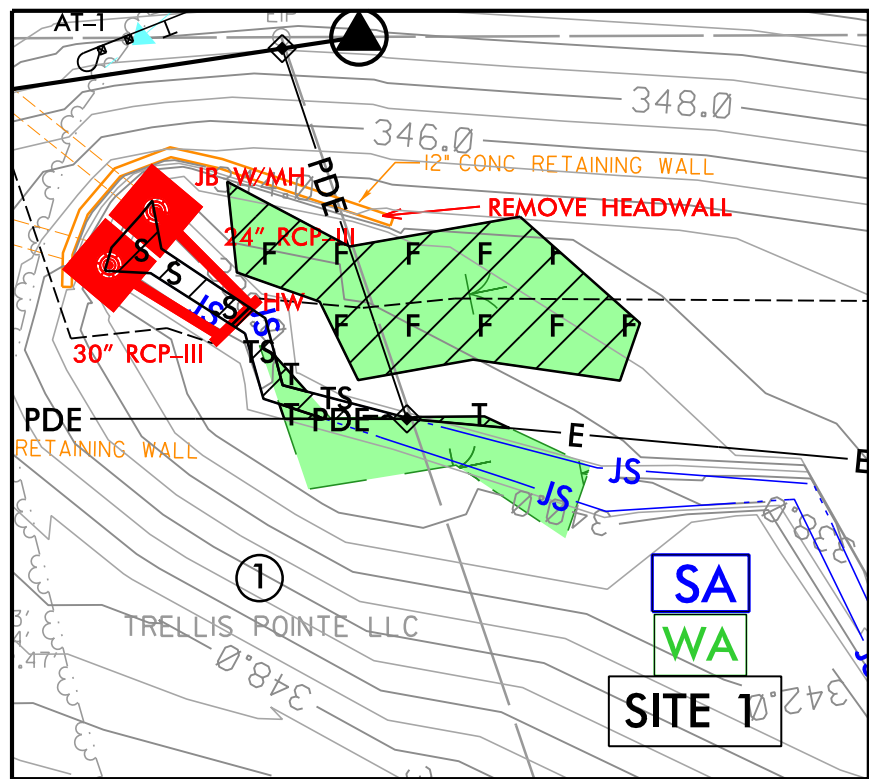
SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

FILL IN WETLAND

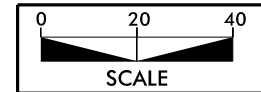
TEMPORARY FILL IN WETLAND

INSET A

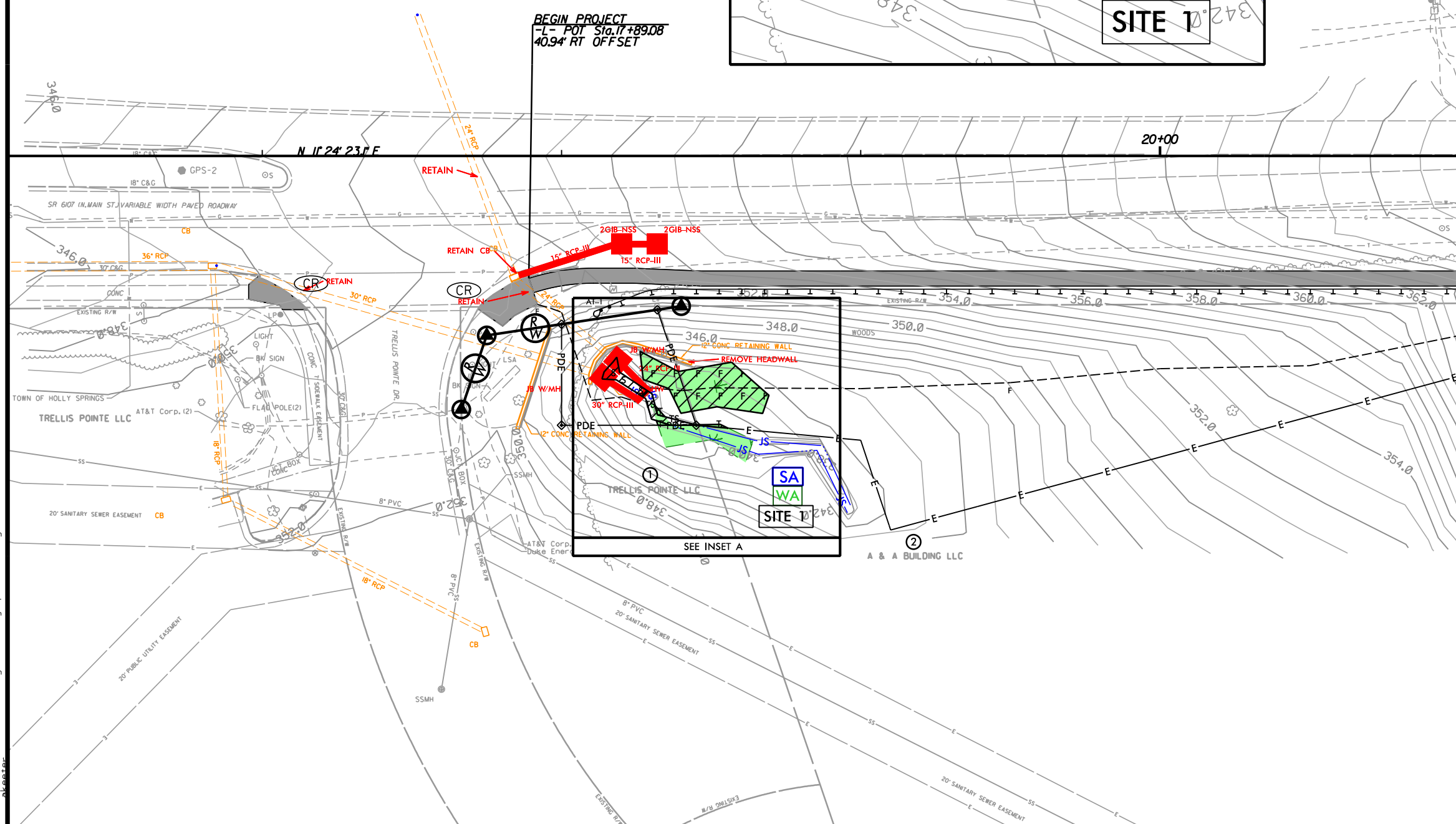


NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
22385	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCHLINE -L- STA. 21+00
SEE SHEET 5



P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. E-0112

Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

6/23/16

SITE 1

PERMIT DRAWING
SHEET 4 OF 5

355.62

354.38

CP 355.78

WETLAND

18 + 50.00

353.14

WETLAND

18 + 28.75

352.64

2:1

18 + 20.00

—/—

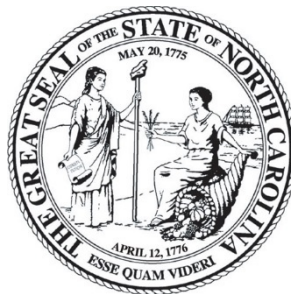
WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	18+14 to 18+69 -L- RT	ROADWAY FILL - SA						< 0.01	< 0.01	15	19	
		ROADWAY FILL - WA	0.01	< 0.01								
TOTALS*:			0.01	< 0.01				< 0.01	< 0.01	15	19	0

NOTES:

TOWN of HOLLY SPRINGS SW PROJECT

MAY 2024
WAKE COUNTY

CERTIFICATE OF PLAN APPROVAL



The posting of this certificate certifies that an erosion and sedimentation control plan has been approved for this project by the North Carolina Department of Environmental Quality in accordance with North Carolina General Statute 113A – 57 (4) and 113A – 54 (d) (4) and North Carolina Administrative Code, Title 15A, Chapter 4B.0107 (c). This certificate must be posted at the primary entrance of the job site before construction begins and until establishment of permanent groundcover as required by North Carolina Administrative Code, Title 15A, Chapter 4B.0127 (b).

**Holly Springs Main Sidewalk Connector
Main Street Holly Springs, NC 27540**

12/18/2025

Date of Plan Approval



WAKE-2026-00324

Project Identifier

Certificate of Coverage Number: _____

JOSH STEIN
Governor

D. REID WILSON
Secretary

WILLIAM E. TOBY VINSON, JR.
Director



12-18-2025

LETTER OF APPROVAL

Town of Holly Springs (Tim Athy)
128 S. Main St.
Holly Springs, NC 27540

RE: Project Name: Holly Springs Main Sidewalk Connector
Permit Number: WAKE-2026-00324
Acres Approved: 1.6
County: Wake
City: Holly Springs
Address: Main Street
River Basin: Cape Fear
Stream Classification: C: Aquatic Life, Secondary Contact Recreation, Fresh water;
NSW: Nutrient Sensitive Waters
Plan Type: Revised Plan

Dear Town of Holly Springs (Tim Athy),

This office has received and reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable and hereby issue this Letter of Approval. The enclosed Certificate of Approval must be posted at the job site. This plan shall expire three (3) years following the date of approval, if no land disturbing activity has been undertaken, as is required by Title 15A NCAC 4B .0129.

As of April 1, 2019, all new construction activities are required to complete and submit an electronic Notice of Intent (eNOI) form requesting a COC under the NCG010000 Construction Stormwater General Permit. You must apply for coverage by submitting a "Construction Stormwater – NCG01 (Subject to the SPCA) in the [AccessDEQ Portal](#). Once your application is complete, you will receive an invoice for the \$127 annual permit fee and can submit payment through the AccessDEQ Portal. Once the fee is processed and the application approved, you will receive the COC via email. As the Financially Responsible Party shown on the FRO form submitted for this project, you MUST obtain the COC prior to commencement of any land disturbing activity. Please direct questions about the eNOI form to the [Stormwater Program staff](#) in the Raleigh central office. If the owner/operator of this project changes in the future, the new responsible party must obtain a new COC.



North Carolina Department of Environmental Quality
Division of Energy, Mineral and Land Resources
512 North Salisbury Street | 1612 Mail Service Center
Raleigh, North Carolina 27699-1612

Title 15A NCAC 4B .0118(a) and the NCG01 permit require that the following documentation be kept on file at the job site:

1. The approved E&SC plan as well as any approved deviation.
2. The NCG01 permit and the COC, once it is received.
3. Records of inspections made during the previous 12 months.

Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to ensure compliance with the approved plan.

North Carolina's Sedimentation Pollution Control Act is performance-oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, the erosion and sedimentation control plan is inadequate to meet the requirements of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statute 113A-51 through 66), this office may require revisions to the plan and implementation of the revisions to ensure compliance with the Act.

Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations, and rules. In addition, local city or county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility Form and on the plan, which you provided. You are requested to file an amended form if there is any change in the information included on the form.

Your cooperation is appreciated.

Sincerely,

Prabesh Mishra

Land Quality Section



SUBSURFACE EXPLORATION & GEOTECHNICAL RECOMMENDATIONS

Main Street Sidewalk Connector

Geotechnical Report

Prepared for:
Town of Holly Springs
Department of Engineering

August 20, 2026



August 19, 2026

Project No.: 22-007

County: Wake

Project Description: Main Street Sidewalk Connector

Subject: Geotechnical Report

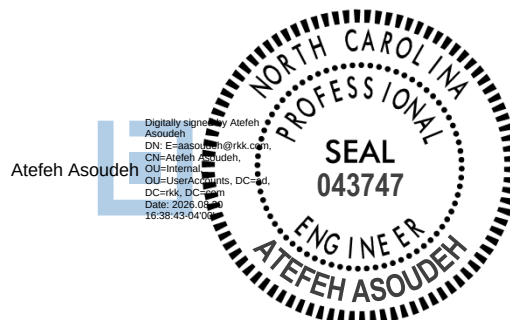
RK&K is pleased to submit the Geotechnical Report for the above referenced project. This report presents a review of the subsurface exploration performed, analysis of the subsurface findings, and recommendations.

If you have any questions regarding this report, please contact us at 919-878-9560.

Prepared by,

Mona Doost, E.I.T
Geotechnical Engineer II

Atefeh Asoudeh, PE
Project Manager, Geotechnical
Registered, North Carolina 043747



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



August 19, 2026

Project No.: 22-007

County: Wake

Project Description: Main Street Sidewalk Connector

Subject: Geotechnical Report

RK&K is pleased to submit the Geotechnical Report for the above referenced project. This report presents a review of the subsurface exploration performed, analysis of the subsurface findings, and recommendations.

If you have any questions regarding this report, please contact us at 919-878-9560.

Prepared by,

Mona Doost, E.I.T
Geotechnical Engineer II

Atefeh Asoudeh, PE
Project Manager, Geotechnical
Registered, North Carolina 043747



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

TABLE OF CONTENTS

1	INTRODUCTION.....	1
2	SITE AND PROJECT DESCRIPTION.....	1
2.1	Site Description.....	1
2.2	Project Description	1
3	FIELD AND LABORATORY WORK	2
3.1	Field Exploration	2
3.2	Soil Sampling	2
3.3	Groundwater.....	2
4	SUBSURFACE CONDITIONS	3
4.1	Geology.....	3
4.2	Subsurface Conditions	3
4.3	Groundwater.....	4
5	EVALUATIONS AND RECOMMENDATIONS	4
5.1	Slope and Embankment Stability	4
5.1.1	Slope Design	4
5.1.2	Undercut for Embankment Stability.....	5
5.2	Miscellaneous.....	5
5.2.1	Reduction of Unclassified Excavation – Clearing and Grubbing.....	5
5.2.2	Reduction of Unclassified Excavation – Unsuitable Unclassified Excavation	5
5.2.3	Unclassified Excavation – Acceptable Below 3 Feet	5
5.2.4	Unclassified and Undercut Excavation – Weathered Rock and Crystalline Rock	5
6	BASIS OF RECOMMENDATIONS.....	6

APPENDICES

Site Location Map
Roadway Subsurface Investigation



1 INTRODUCTION

In accordance with our proposed scope of services, Rummel, Klepper & Kahl LLP (RK&K) has completed the Subsurface Exploration and Geotechnical Engineering Recommendations for the Main Street Sidewalk Connector located in Holly Springs, North Carolina.

The purpose of this study was to determine general subsurface conditions at the project site and to evaluate those conditions with respect to geotechnical engineering considerations for design of the sidewalk and the proposed construction. The specific scope of our services on this task consisted of exploring the subsurface conditions using hand augers and rod sounding, evaluating the subsurface conditions encountered in the test borings, developing geotechnical recommendations for design and construction of roadway and pavements, and submitting our findings in a report.

Included in this report are descriptions of the field investigation on which this report is based. The results of this work are contained in the appendices of this report.

2 SITE AND PROJECT DESCRIPTION

2.1 Site Description

The project site is located along the existing NC 55 (N Main Street) between Anchor Creek Way and Arbor Creek Drive in Holly Springs, North Carolina. NC 55 is a mixed residential and business road and currently is a two-lane undivided facility. Existing ground surface elevations vary from approximately EL 346.3 at the southern end of the project near Trellis Pont Drive to approximately EL 398.3 at the northern end of the project near Arbor Creek Drive.

2.2 Project Description

The proposed construction will consist of grading, drainage, and construction of sidewalk along the east side of N. Main Street from Trellis Pointe Drive to Arbor Creek Drive. The length of project is 0.239 miles.

3 FIELD WORK

3.1 Field Exploration

The following roadway alignments were investigated during the field exploration totaling approximately 0.239 miles:

Table 1: Summary of Investigation

Alignment	Station Range (±)
-L-	16+95.00 to 29+57.83.

Subsurface explorations were conducted from June 28, 2024 through July 2, 2024 by RK&K. The total subsurface investigation by RK&K consisted of conducting six (6) Hand Auger (HA) borings to depths ranging from 1.0 to 6.0 feet. The subsurface investigation also consisted of five (5) Rod Soundings to verify rock depth.

The RK&K test borings were located using a hand-held Global Positioning System (GPS) unit. The location of HA borings and rod soundings are shown on the Roadway Inventory plan sheets in Appendix A.

3.2 Soil Sampling

The RK&K borings were advanced using a Hand Auger tool. Soil samples were collected at all hand auger locations for each soil type encountered.

The soils were classified in general accordance with the American Association of State Highway and Transportation Officials (AASHTO) Soil Classification System. An RK&K geologist performed field soil classifications and measured groundwater depth in one location approximately 24 hours after completion of hand auger holes. Five of the borings were backfilled immediately after completion of drilling due to their proximity to the existing roadway. The information was recorded on field boring logs to create subsurface inventory reports included in appendices.

3.3 Groundwater

Depth to groundwater was measured after completion of hand auger holes in one location. The depth to the bottom of each borehole was also measured after the removal of the hand auger hole to determine the susceptibility of the borehole to collapse or cave.

It is generally desirable to allow test borings to remain open for at least 24 hours after the completion of drilling and the removal of the drill tools and casing from the borehole. For safety reasons, it was necessary to backfill five of the borings immediately after the completion of hand auger holes since the borings were performed through or adjacent to the existing road.

Section 4.3 summarizes the borings in which groundwater was encountered and the depth to groundwater. Groundwater depths are also shown on the boring logs in Appendix A.

4 SUBSURFACE CONDITIONS

4.1 Geology

The proposed project is located in the Piedmont Physiographic Province. The terrain within and around the project is flat to gently rolling hills. The land surrounding the proposed sidewalk is typically residential, commercial, or forested. Topographic relief along the length of the project alignment ranges in elevation from feet.

The proposed sidewalk is underlain by the Cary Metamorphic Suite composed of Late Proterozoic-Paleozoic metavolcanic and metasedimentary units. The project is in close proximity to the Jonesboro fault which could result in blocks of Triassic Newark Supergroup/Chatham Group within the scope. Rock outcrops exposed along N Main Street are composed of silvery gray to tan-white fine-grained phyllite. Rock is well-foliated and intensely to moderately weathered with abundant fracturing present. Weathering occasionally results in localized clay-alteration. Fe-Mn staining common (esp. along fractures), scattered stringers and phenocrysts of quartz and feldspar present.

4.2 Subsurface Conditions

The boring logs presented in the Roadway Subsurface Investigation in Appendix A provide details related to the subsurface conditions encountered in the various borings. The stratification lines shown on the boring logs are approximate and transitions between material types and/or strata may occur gradually or abruptly. Additionally, the borings depict conditions at the time and specific location as indicated on the individual borings. Some conditions, including groundwater between borings, could vary from those encountered during different times of the year.

In general, the origins of the subsurface materials encountered are as defined below:

- Residual Soil

Residual Soil: Residual soil was encountered in all borings. The residual soils typically consisted of medium dense to dense SAND with varying percentages of clay(AASHTO: A-2-7). The residual soils also consisted of soft to stiff SILT with varying percentages of sand (AASHTO: A-4) and stiff CLAY with varying percentages of sand (AASHTO: A-6, A-7-5).

Weathered/crystalline rock: Weathered/crystalline rock was encountered in 3 of the 6 borings drilled. The following borings encountered rock: HA-1 reached auger refusal at 4.0 ft, HA-3 reached auger refusal at 1.0 ft, HA-4 reached auger refusal at 3.0 ft. Across all 5 rod soundings, rods refused between 3.4 ft to 6.0 ft.

4.3 Groundwater

Groundwater was encountered in the following borings summarized below in the Table 2. The actual level of the hydrostatic water table and the amount and level of perched water should be anticipated to fluctuate throughout the year, depending upon variations in precipitation, surface run-off, infiltration, site topography, and drainage.

Table 2: Groundwater Data

Boring No.	Existing Ground Surface EL. (ft)	0-hr Groundwater Depth (ft)	0-hr Groundwater EL. (ft)	24-hr Groundwater Depth (ft)	24-hr Groundwater EL. (ft)
HA-1	346.3	DRY ⁽¹⁾	342.3	DRY ⁽¹⁾	342.3
HA-2	356.6	DRY ⁽¹⁾	350.6	FIAD ⁽²⁾	N/A ⁽³⁾
HA-3	387.8	DRY ⁽¹⁾	386.8	FIAD ⁽²⁾	N/A ⁽³⁾
HA-4	396.1	DRY ⁽¹⁾	393.1	FIAD ⁽²⁾	N/A ⁽³⁾
HA-5	396.8	DRY ⁽¹⁾	390.8	FIAD ⁽²⁾	N/A ⁽³⁾
HA-6	398.3	DRY ⁽¹⁾	392.3	FIAD ⁽²⁾	N/A ⁽³⁾

NOTES:

- 1) DRY = Boring was dry immediately after drilling
- 2) FIAD = Boring was backfilled immediately after drilling
- 3) N/A = Water level was not measured

5 EVALUATIONS AND RECOMMENDATIONS

The following recommendations have been developed on the basis of the previously described project characteristics and subsurface conditions. If there are any significant changes to the project characteristics or if significantly different subsurface conditions are encountered during construction, RK&K should be consulted so that the recommendations of this report can be reevaluated. It is our understanding that the project will be constructed in general accordance with the NCDOT Standard Specifications for Roads and Structures.

5.1 Slope and Embankment Stability

5.1.1 Slope Design

It is recommended that all fill and cut slopes be constructed at a ratio of 2:1 (Horizontal:Vertical) or flatter as shown on the roadway plans and cross sections. Embankment preparation and bench cuts should be in accordance with Section 235 of the NCDOT Standard Specifications.

5.1.2 Undercut for Embankment Stability

Undercut for embankment stability is recommended where soft, alluvial soils are present within the footprint of the proposed embankment. Areas for undercut for embankment stability were not encountered during the subsurface investigation. If encountered, these soils should be undercut to firm material or to a minimum depth of 3 feet and replaced with suitable soil. Backfill to replace undercut material should be Select Material Class II or III. If wet, unstable soils are encountered in the undercut area, geotextile shall be placed at the bottom of the undercut. Use Type 4 geotextile in accordance Section 1056 of the Standard Specifications. Use Select Material Class III for undercut backfill in water. A contingency quantity of 200 cubic yards of Undercut Excavation for embankment stability is recommended to be included in the contract to be used at the discretion of the Engineer. A contingency quantity of 200 square yards of Geotextile for Soil Stabilization is recommended to be included in the contract to be used at the discretion of the Engineer. Geotextile for Soil Stabilization should be in accordance with Section 270 of the NCDOT Standard Specifications.

5.2 Miscellaneous

5.2.1 Reduction of Unclassified Excavation – Clearing and Grubbing

No significant loss of unclassified excavation due to clearing and grubbing is anticipated.

5.2.2 Reduction of Unclassified Excavation – Unsuitable Unclassified Excavation

Based on the current roadway plans and cross sections, the unclassified excavation will be primarily derived from cut sections and ditch excavations. Soils within excavations with plasticity indices (PI) greater than 35 were not encountered during the subsurface investigation. If encountered, the material should be wasted or used in landscape areas at the discretion of the Engineer.

5.2.3 Unclassified Excavation – Acceptable Below 3 Feet

Based on the current roadway plans and cross sections, the unclassified excavation will be primarily derived from cut sections and ditch excavations. Soils with plasticity indices (PI) of 26 through 35 were not encountered during the subsurface investigation. If encountered, these soils are acceptable for use as borrow material but should not be placed within the top 3 feet of the embankment in accordance with Section 1018 of the NCDOT Standard Specifications.

5.2.4 Unclassified and Undercut Excavation – Weathered Rock and Crystalline Rock

Based on the field investigation, rock outcrops were found along the -L- alignment, approximately starting at station 21+80.00 and ending at station 23+10.00. The outcrop extrudes out of the existing ground along the slope of the hill. Offset of the bottom of the slope of outcrop from the edge of road pavement ranges from 10 ft to 20 ft. Weathered and Crystalline Rock will be encountered in the excavation of this area and continues to Station 25+00.00, as

shown in subsurface inventory cross sections. The approximate amount of rock that will need to be excavated (the rock found between existing ground and the proposed ground in an area of cut) is 41,450 cubic ft. (or 1,535 cubic yds.). “Rock Blasting” will not be permitted for this project. Any required rock excavation shall be performed using methods selected by the Contractor in accordance with the project requirements and applicable regulations.

A 6 inches undercut of rock will be needed to facilitate the construction of ditch and berm in areas with shallow rock. This area will be along the -L- alignment, approximately starting at station 22+00 and ending at station 25+00. A quantity of approximately 127 cubic yards is recommended to be included in the contract in consideration of this item to be used at the discretion of the Engineer. A contingency quantity of 200 cubic yards of Undercut Excavation for ditch and berm areas is recommended to be included in the contract to be used at the discretion of the Engineer. Use Select Granular Material Class III as backfill for the Undercut Excavation.

6 BASIS OF RECOMMENDATIONS

This report has been prepared to present the geotechnical conditions at the site, and the recommended method for the proposed construction. Adequate recommendations have been provided to serve as a basis for design and preparation of plans and specifications. The opinions, conclusions and recommendations contained in this report are based upon our professional judgment and generally accepted principles of geotechnical engineering. Inherent to these are the assumptions that the earthwork and foundation construction should be monitored and tested by an engineering technician acting under the guidance of a geotechnical engineer licensed in the State of North Carolina.

These analyses and recommendations are, of necessity, based on the information available at the time of the actual writing of the report and on the site conditions, surface and subsurface, that existed at the time the exploratory borings were performed. Furthermore, assumptions have been made regarding the limited exploratory borings, in relation to both the lateral extent of the site conditions and to the depth.

The nature and extent of variations between borings may not become evident until construction. If variations from the anticipated conditions are encountered, it may be necessary to revise the recommendations in this report.

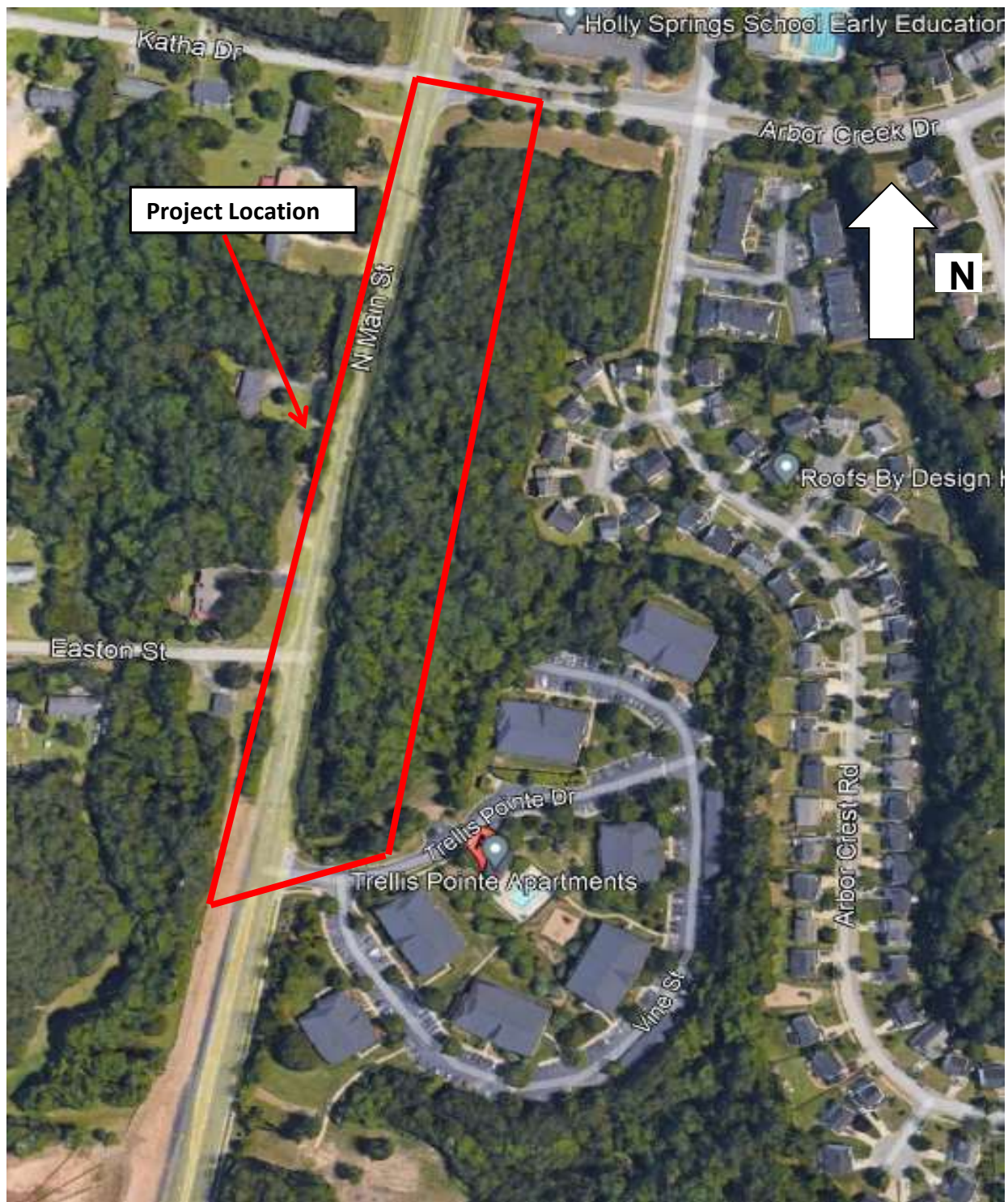
Our professional services have been performed in accordance with generally accepted engineering principles and practices; no other warranty, expressed or implied, is made. RK&K assumes no responsibility for interpretations made by others on the work performed by RK&K.

We recommend that this report be made available in its entirety to contractors for informational purposes only. The boring logs contained in this report represent an integral part of this report and incorrect interpretation of the data may occur if the attachments are separated from the text. The project plans or specifications should include the following note:

Appendices

Site Location Map

Roadway Subsurface Investigation



8601 Six Forks Rd. Forum 1, Suite 700
Raleigh, North Carolina 27615
(919) 878-9560

Site Location Map

Holly Springs Sidewalk

Wake County, North Carolina

Drawn By:
SM

Approved By:
AA

Scale:
1 inch = 240 feet

Date:
8/28/2024

Figure No:

A-1

PROJECT: 22-007

SEE SHEET 3 FOR PLAN SHEET LAYOUT
AT TIME OF INVESTIGATION

CONTENTS

LINE	STATION	PLAN
-L-	16+95 - 29+58	4 - 6

CROSS SECTIONS

LINE	STATION	SHEET
-L-	18+50 - 28+50	7 - 22

TOWN OF HOLLY SPRINGS

ROADWAY

SUBSURFACE INVESTIGATION

COUNTY WAKE

PROJECT DESCRIPTION SIDEWALK ALONG SR 6107
(N. MAIN STREET) FROM TRELIS POINTE DRIVE
TO ARBOR CREEK DRIVE
HOLLY SPRINGS, NORTH CAROLINA

STATE	PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	22-007	1	

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. RK&K DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF RK&K AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO PERFORM INDEPENDENT SUBSURFACE INVESTIGATIONS AND MAKE INTERPRETATIONS AS NECESSARY TO CONFIRM CONDITIONS ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

NOTES:
1. THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY RK&K AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
2. BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

S. MUSAFER

M. SCHUBERT

INVESTIGATED BY S. MUSAFER

DRAWN BY S. MUSAFER

CHECKED BY M. Doost

SUBMITTED BY RK&K

DATE AUGUST 2024



P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112

Engineers | Construction Managers | Planners | Scientists
www.rkk.com

Responsive People | Creative Solutions



SIGNATUREDATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.

22-007

SHEET NO.

2

TOWN OF HOLLY SPRINGS

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM, BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE, VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6

SOIL LEGEND AND AASHTO CLASSIFICATION

GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)							SILT-CLAY MATERIALS (> 35% PASSING #200)							ORGANIC MATERIALS		
GROUP CLASS.	A-1		A-3	A-2		A-4		A-5	A-6	A-7	A-1, A-2		A-3		A-4, A-5		A-6, A-7
SYMBOL	A-1-a		A-1-b		A-2-4	A-2-5	A-2-6	A-2-7			A-4	A-5	A-6	A-7	A-7-5, A-7-6		
% PASSING #10 #40 #200	50 MX	30 MX	15 MX	50 MX	25 MX	10 MX	35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN	36 MN	36 MN	
MATERIAL PASSING #40 LL PI	—		6 MX	—	NP	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	41 MN	
GROUP INDEX	0		0	0		4 MX		8 MX		12 MX	16 MX	NO MX					
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS, GRAVEL, AND SAND		FINE SAND		SILTY OR CLAYEY GRAVEL AND SAND		SILTY SOILS		CLAYEY SOILS								
GEN. RATING AS SUBGRADE	EXCELLENT TO GOOD							FAIR TO POOR			FAIR TO POOR		POOR		UNSATURABLE		

PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30

GRADATION

WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.

ANGULARITY OF GRAINS

THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.

MINERALOGICAL COMPOSITION

MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE LL < 31
MODERATELY COMPRESSIBLE LL = 31 - 50
HIGHLY COMPRESSIBLE LL > 50

PERCENTAGE OF MATERIAL

ORGANIC MATERIAL	GRANULAR SOILS	SILT - CLAY SOILS	OTHER MATERIAL
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%	TRACE
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%	LITTLE
MODERATELY ORGANIC	5 - 10%	12 - 20%	SOME
HIGHLY ORGANIC	> 10%	> 20%	HIGHLY

GROUND WATER

▽

WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING

▼

STATIC WATER LEVEL AFTER 24 HOURS

▽PW

PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA

○

SPRING OR SEEP

MISCELLANEOUS SYMBOLS

ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION

SOIL SYMBOL

ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT

INFERRED SOIL BOUNDARY

INFERRED ROCK LINE

ALLUVIAL SOIL BOUNDARY

25/025

DIP & DIP DIRECTION OF ROCK STRUCTURES

SPT DPT DMT VST PMT TEST BORING

AUGER BORING

CORE BORING

MONITORING WELL

PIEZOMETER INSTALLATION

SLOPE INDICATOR INSTALLATION

CONE PENETROMETER TEST

SOUNDING ROD

TEST BORING WITH CORE

SPT N-VALUE

RECOMMENDATION SYMBOLS

UNDERCUT

UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE

UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK

SHALLOW UNDERCUT

UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL

ABBREVIATIONS

AR - AUGER REFUSAL
BT - BORING TERMINATED
CL - CLAY
CPT - CONE PENETRATION TEST
CSE - COARSE
DMT - DILATOMETER TEST
DPT - DYNAMIC PENETRATION TEST
e - VOID RATIO
F - FINE
FOSS - FOSSILIFEROUS
FRAC - FRACTURED, FRACTURES
FRAGS - FRAGMENTS
HL - HIGHLY

MED. - MEDIUM
MICA - MICACEOUS
MOD. - MODERATELY
NP - NON PLASTIC
ORG. - ORGANIC
PMT - PRESSUREMETER TEST
SAP. - SAPROLITIC
SD - SAND, SANDY
SL - SILT, SILTY
SLI - SLIGHTLY
TCR - TRICONE REFUSAL
w - MOISTURE CONTENT
V - VERY

VST - VANE SHEAR TEST
WEA. - WEATHERED
% - UNIT WEIGHT
%- DRY UNIT WEIGHT

SAMPLE ABBREVIATIONS
S - BULK
SS - SPLIT SPOON
ST - SHELBY TUBE
RS - ROCK
RT - RECOMPACTED TRIAXIAL
CBR - CALIFORNIA BEARING RATIO

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL. THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:

WEATHERED ROCK (WR)

CRYSTALLINE ROCK (CR)

NON-CRYSTALLINE ROCK (NCR)

COASTAL PLAIN SEDIMENTARY ROCK (CP)

NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.

FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.

FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.

COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.

WEATHERING

FRESH

VERY SLIGHT (V SLI.)

SLIGHT (SLI.)

MODERATE (MOD.)

MODERATELY SEVERE (MOD. SEV.)

SEVERE (SEV.)

VERY SEVERE (V SEV.)

COMPLETE

ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.

ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN. CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.

ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.

SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.

ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. IF TESTED, WOULD YIELD SPT REFUSAL

ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF

ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF

ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.

TERMS AND DEFINITIONS

ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.
AQUIFER - A WATER BEARING FORMATION OR STRATA.
ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.
ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC.
ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.
CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.
COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.
CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.
DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK.
DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.
DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.
FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.
FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.
FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL.
FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.
FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.
JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.
LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.
LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.
MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.
PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.
RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.
ROCK QUALITY DESIGNATION (RQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.
SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.
SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.
SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.
STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.
STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.
STRATA ROCK QUALITY DESIGNATION (SRQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.
TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.

BENCH MARK: N/A

ELEVATION: N/A FEET

NOTES:
FIAD - FILLED IN AFTER DRILLING

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE SIZE OPENING (MM)

	4	10	40	60	200	270
	4.76	2.00	0.42	0.25	0.075	0.053

BOULDER (BLDR.) COBBLE (COB.) GRAVEL (GR.) COARSE SAND (CSE, SD.) FINE SAND (F SD.) SILT (SL.) CLAY (CL.)

GRAIN SIZE

MM	305	75	2.0	0.25	0.05	0.005
IN.	12	3				

SOIL MOISTURE - CORRELATION OF TERMS

SOIL MOISTURE SCALE (ATTERBERG LIMITS)		FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
LL PLASTIC RANGE (PI) PL	LIQUID LIMIT	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
	PLASTIC LIMIT	- WET - (W)	SEMI-SOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
	OPTIMUM MOISTURE SHRINKAGE LIMIT	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
		- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NON PLASTIC	0-5	VERY LOW
SLIGHTLY PLASTIC	6-15	SLIGHT
MODERATELY PLASTIC	16-25	MEDIUM
HIGHLY PLASTIC	26 OR MORE	HIGH

COLOR

DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
☐ CME-45C
☐ CME-55
☐ CME-550
☐ VANE SHEAR TEST
☐ PORTABLE HOIST
☐
☐

ADVANCING TOOLS:
☐ CLAY BITS
☐ 6" CONTINUOUS FLIGHT AUGER
☐ 8" HOLLOW AUGERS
☐ HARD FACED FINGER BITS
☐ TUNG-CARBIDE INSERTS
☐ CASING ☐ W/ ADVANCER
☐ TRICONE _____ * STEEL TEETH
☐ TRICONE _____ * TUNG-CARB.
☐ CORE BIT
☐

HAMMER TYPE:
☐ AUTOMATIC ☐ MANUAL

CORE SIZE:
☐ -B _____ ☐ -H _____
☐ -N _____

HAND TOOLS:
☐ POST HOLE DIGGER
☒ HAND AUGER
☒ SOUNDING ROD
☐ VANE SHEAR TEST
☐

ROCK HARDNESS

VERY HARD

HARD

MODERATELY HARD

MEDIUM HARD

SOFT

VERY SOFT

CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.

CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.

CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.

CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.

CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK, CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.

CAN BE CARVED WITH KNIFE, CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGER NAIL.

FRACTURE SPACING

TERM

SPACING

VERY WIDE

WIDE

MODERATELY CLOSE

CLOSE

VERY CLOSE

MORE THAN 10 FEET

3 TO 10 FEET

1 TO 3 FEET

0.16 TO 1 FOOT

LESS THAN 0.16 FEET

BEDDING

TERM

THICKNESS

VERY THICKLY BEDDED

THICKLY BEDDED

THINLY BEDDED

VERY THINLY BEDDED

THICKLY LAMINATED

THINLY LAMINATED

4 FEET

1.5 - 4 FEET

0.16 - 1.5 FEET

0.03 - 0.16 FEET

0.008 - 0.03 FEET

< 0.008 FEET

INDURATION

FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.

FRIABLE

MODERATELY INDURATED

INDURATED

EXTREMELY INDURATED

RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.

GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.

GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.

SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.

DATE: 8-15-14

I CERTIFY THAT THESE PLANS WERE PREPARED AND THAT THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING PLANS, THE LATEST EDITION OF THE ENGINEERING DESIGN AND CONSTRUCTION STANDARDS OF THE TOWN OF HOLLY SPRINGS AND OTHER APPLICABLE TOWN ORDINANCES AND POLICIES. THE ENGINEER WHOSE SEAL AND SIGNATURE APPEAR BELOW CERTIFIES THAT THE TOWN OF HOLLY SPRINGS ENGINEERING DESIGN AND CONSTRUCTION STANDARDS HAVE BEEN THOROUGHLY REVIEWED FOR APPLICABILITY TO THIS PARTICULAR PROJECT.

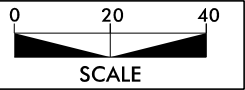
ALL CONSTRUCTION SHALL CONFORM TO TOWN OF HOLLY SPRINGS
ENGINEERING DESIGN AND CONSTRUCTION STANDARDS.



CONTRACT: 22385

5/14/99

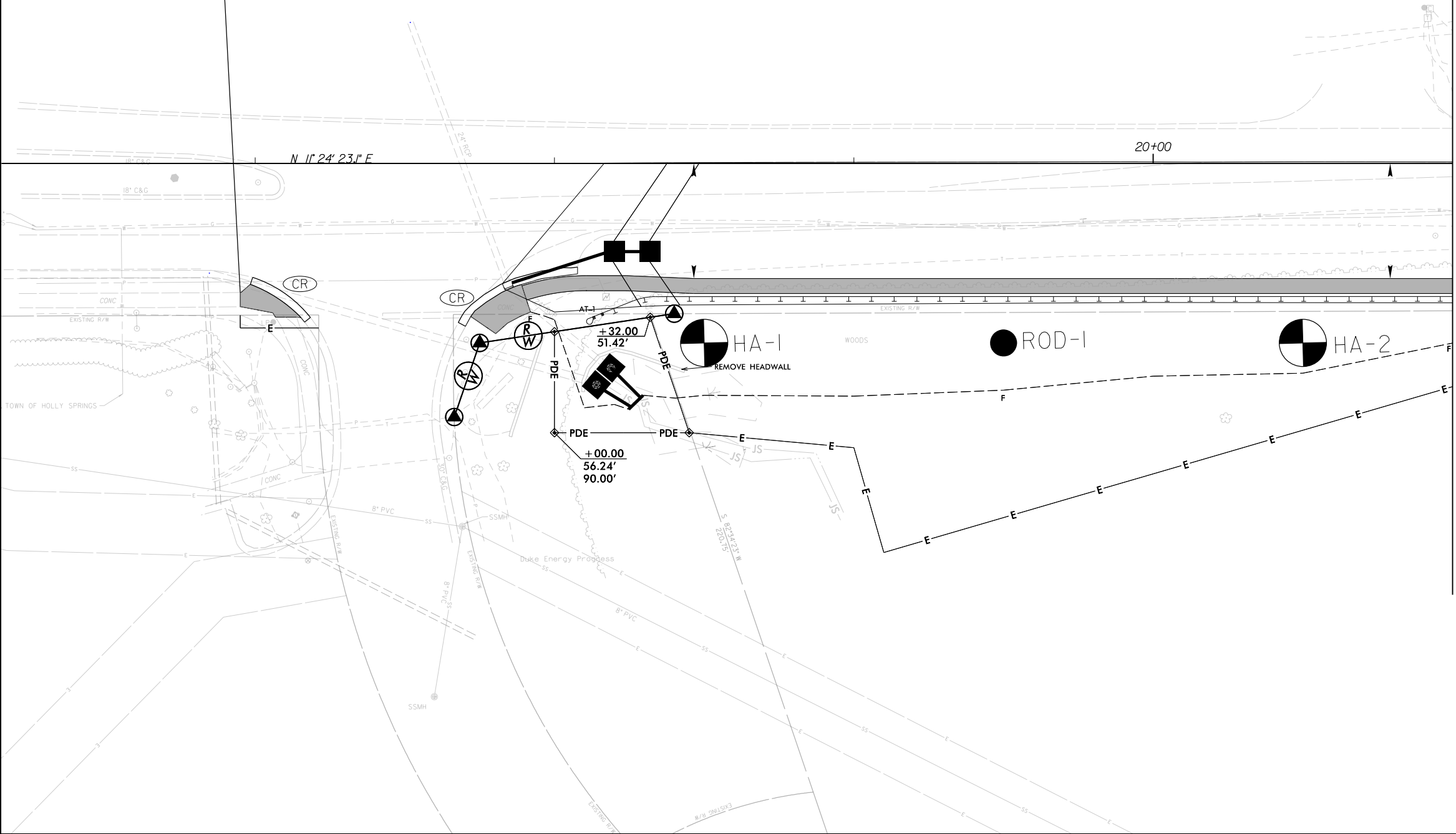
PROJECT REFERENCE NO.	SHEET NO.
22385	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



NAD 83/2011

BEGIN PROJECT
-L- POT Sta. 16+95.00
43.17' RT OFFSET

MATCHLINE -L- STA. 21+00
SEE SHEET 5



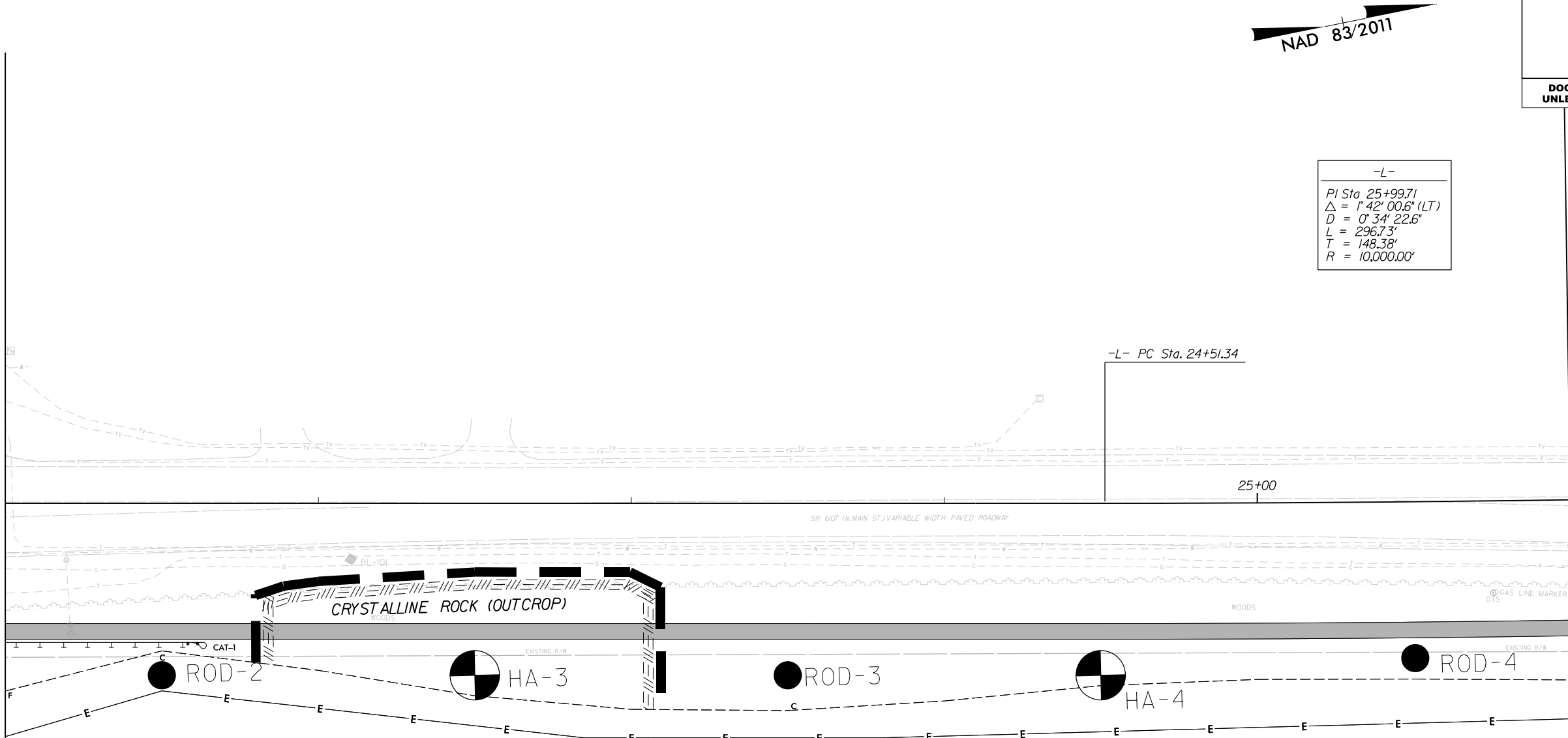
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112

Engineers | Construction Managers | Planners | Scientists
www.rkk.com

Responsive People | Creative Solutions

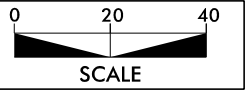
5/14/99

MATCHLINE -L- STA. 21+00
SEE SHEET 4



-L-
PI Sta 25+99.71
 $\Delta = 1^{\circ} 42' 00.6''$ (LT)
 $D = 0^{\circ} 34' 22.6''$
 $L = 296.73'$
 $T = 148.38'$
 $R = 10,000.00'$

PROJECT REFERENCE NO.		SHEET NO.	
22385		5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



MATCHLINE -L- STA. 26+00
SEE SHEET 6



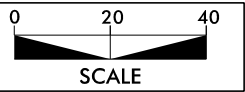
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112

Engineers | Construction Managers | Planners | Scientists
www.rkk.com

Responsive People | Creative Solutions

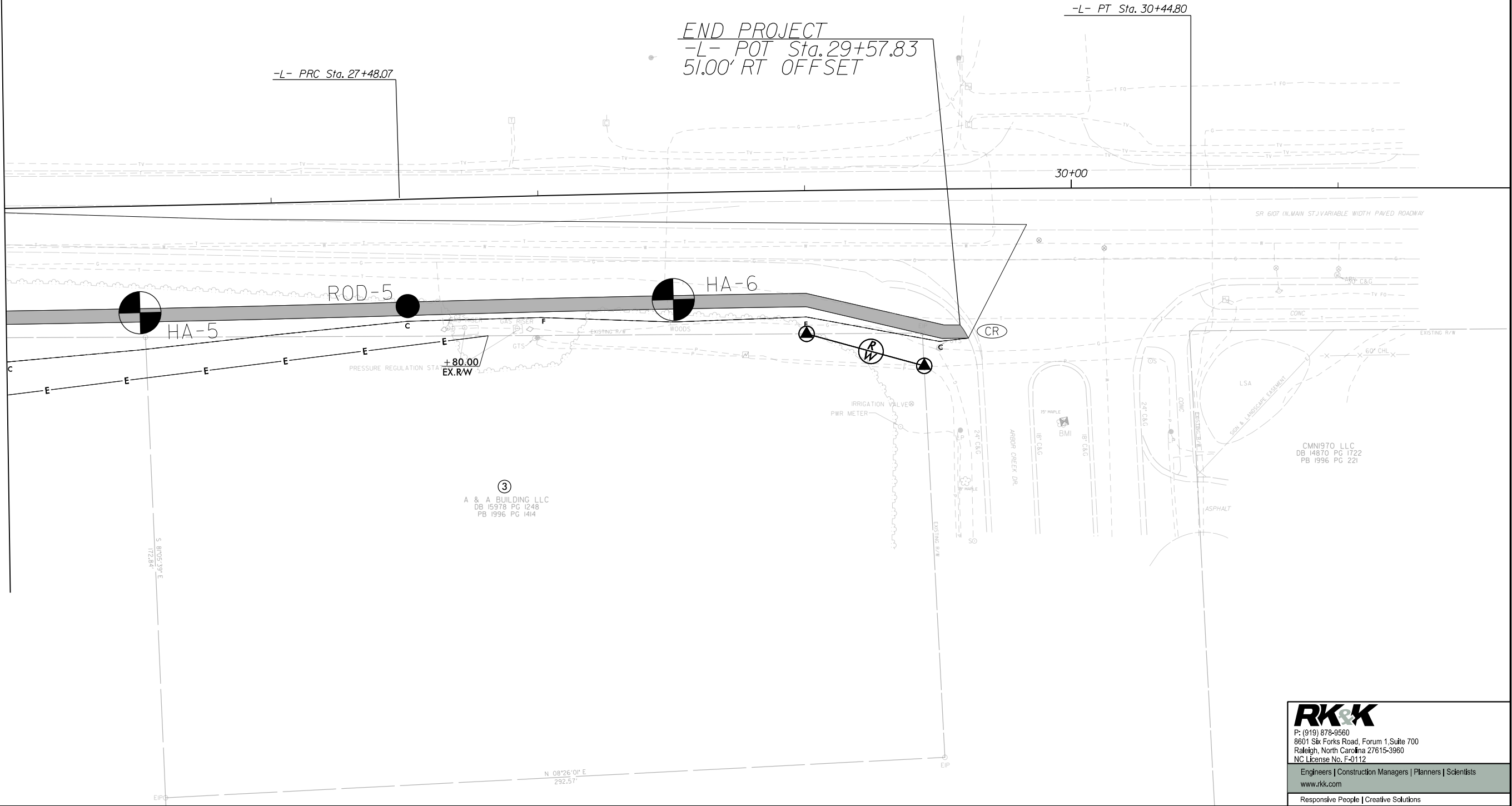
5/14/99

PROJECT REFERENCE NO.	SHEET NO.
22385	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



NAD 83/2011

MATCHLINE -L- STA. 26+00
SEE SHEET 5



RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112

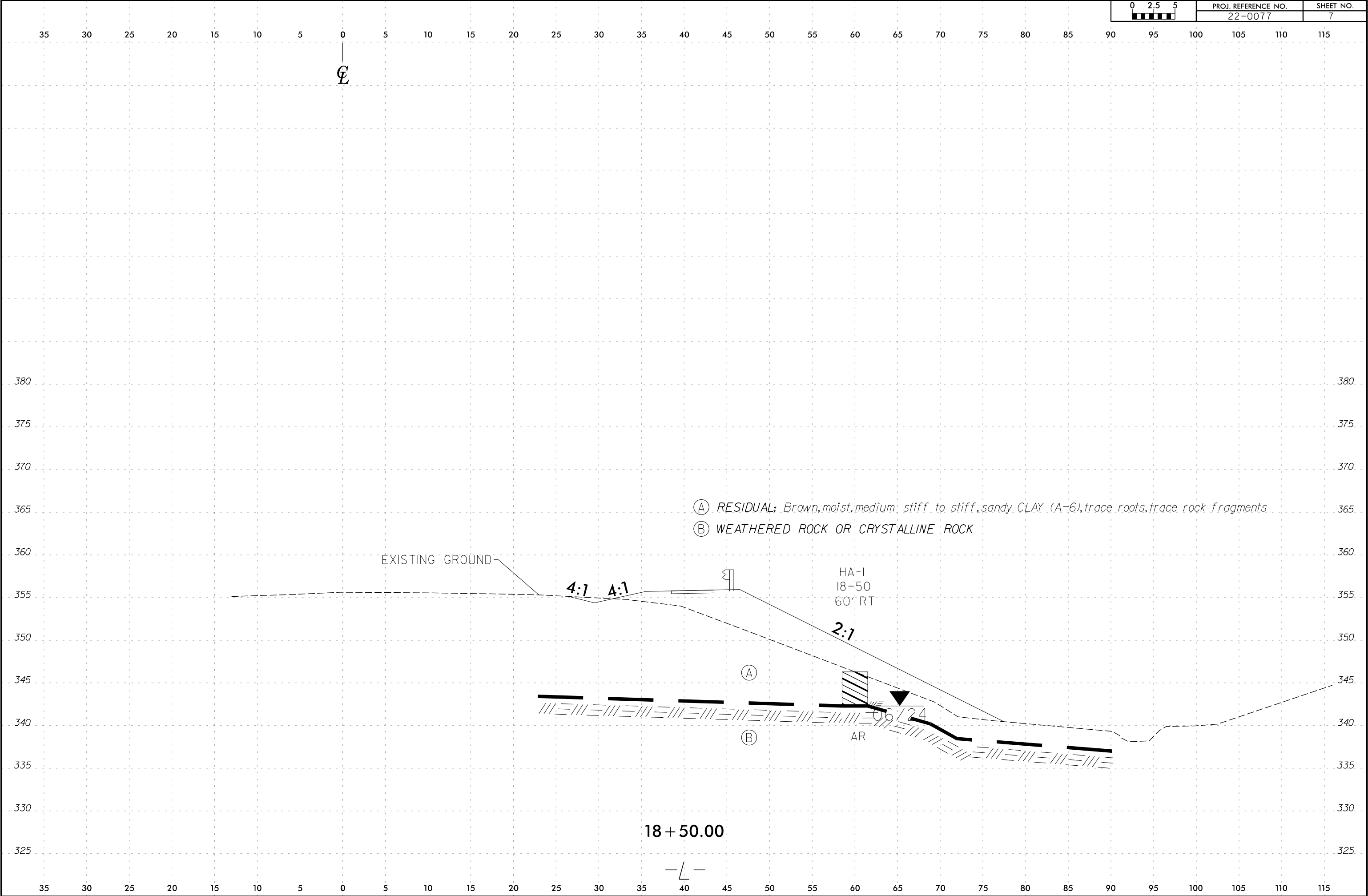
Engineers | Construction Managers | Planners | Scientists
www.rkk.com

Responsive People | Creative Solutions

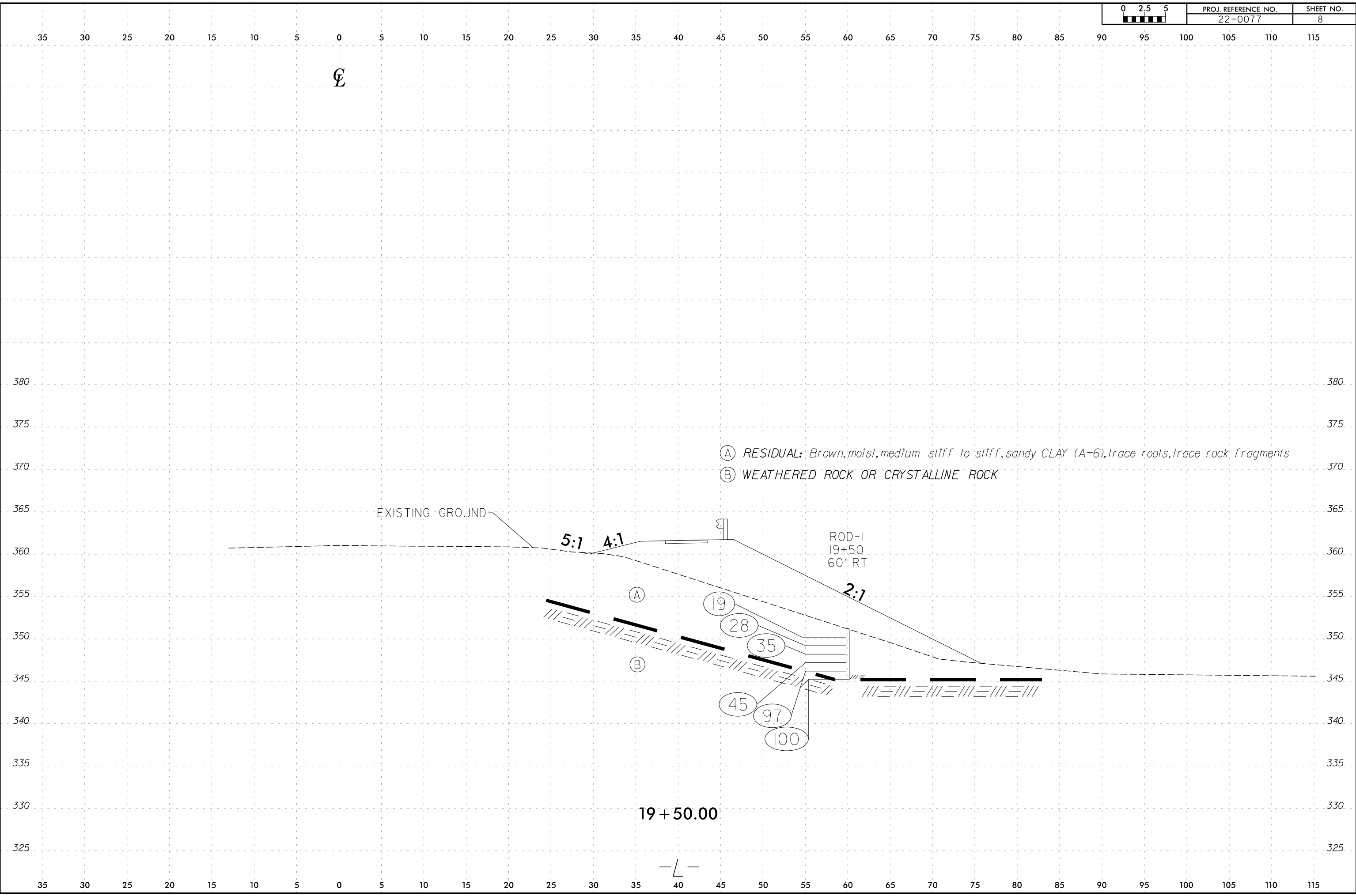
6/23/16

8/28/2024
R:\Geotech\Investigation\Design\CADD_GEO\TECH\XSC\XSI\22385_GEO_XS\L.L-75.dgn
anusafer

02.55	PROJ. REFERENCE NO.	SHEET NO.
	22-0077	7



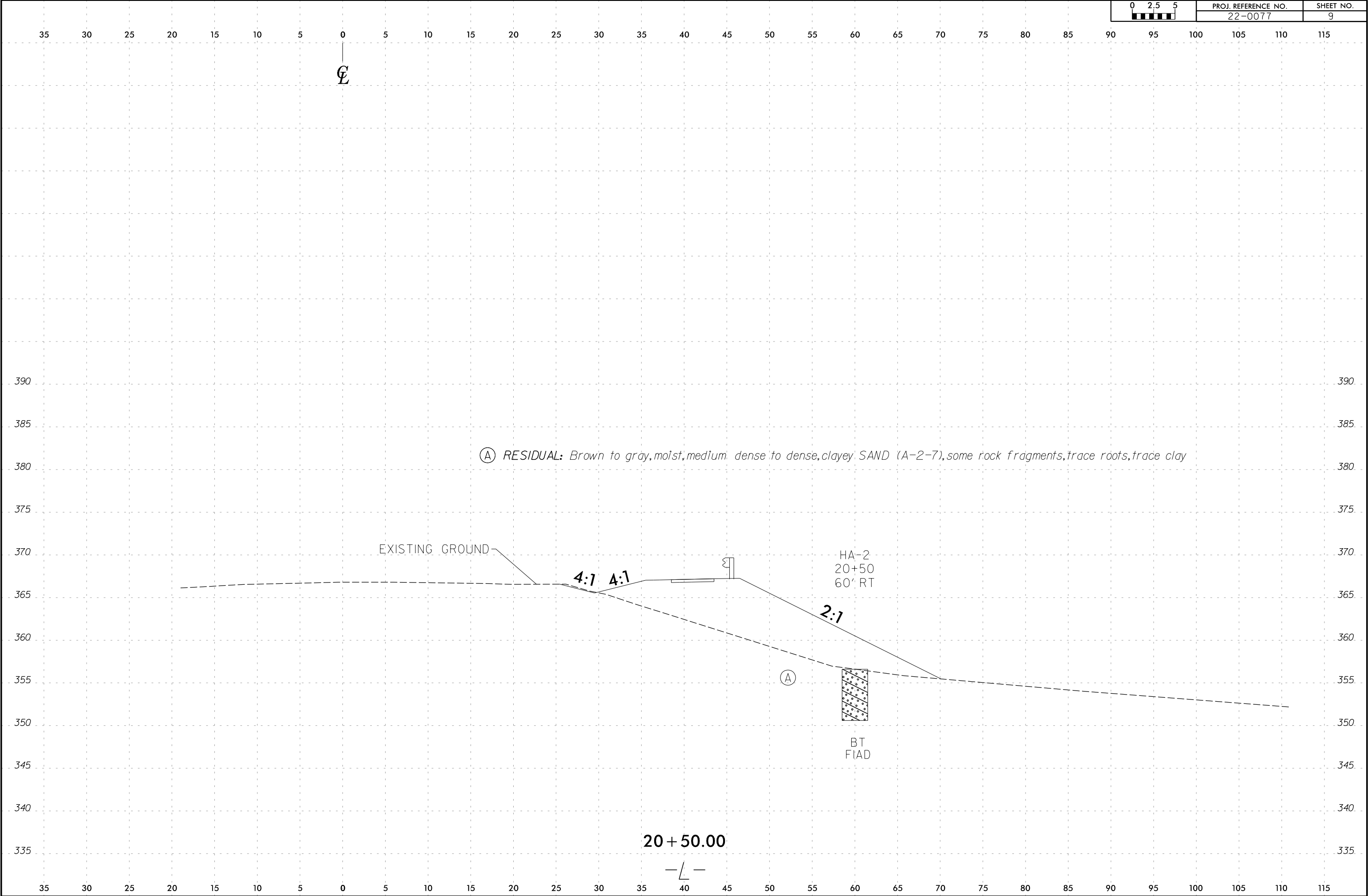
6/23/16
8/28/2024
R:\Geotech\Investigation\Design\CADD_GEO\TECH\sec\XSI\22385_GEO.XSL.L-75.dgn
ansal er



6/23/16

8/28/2024
Rt:Geotech\Investigation\Design\CADD_GEO\TECH\asc\XSI\22385_GEO_XS1.L-75.dgn
anusafer

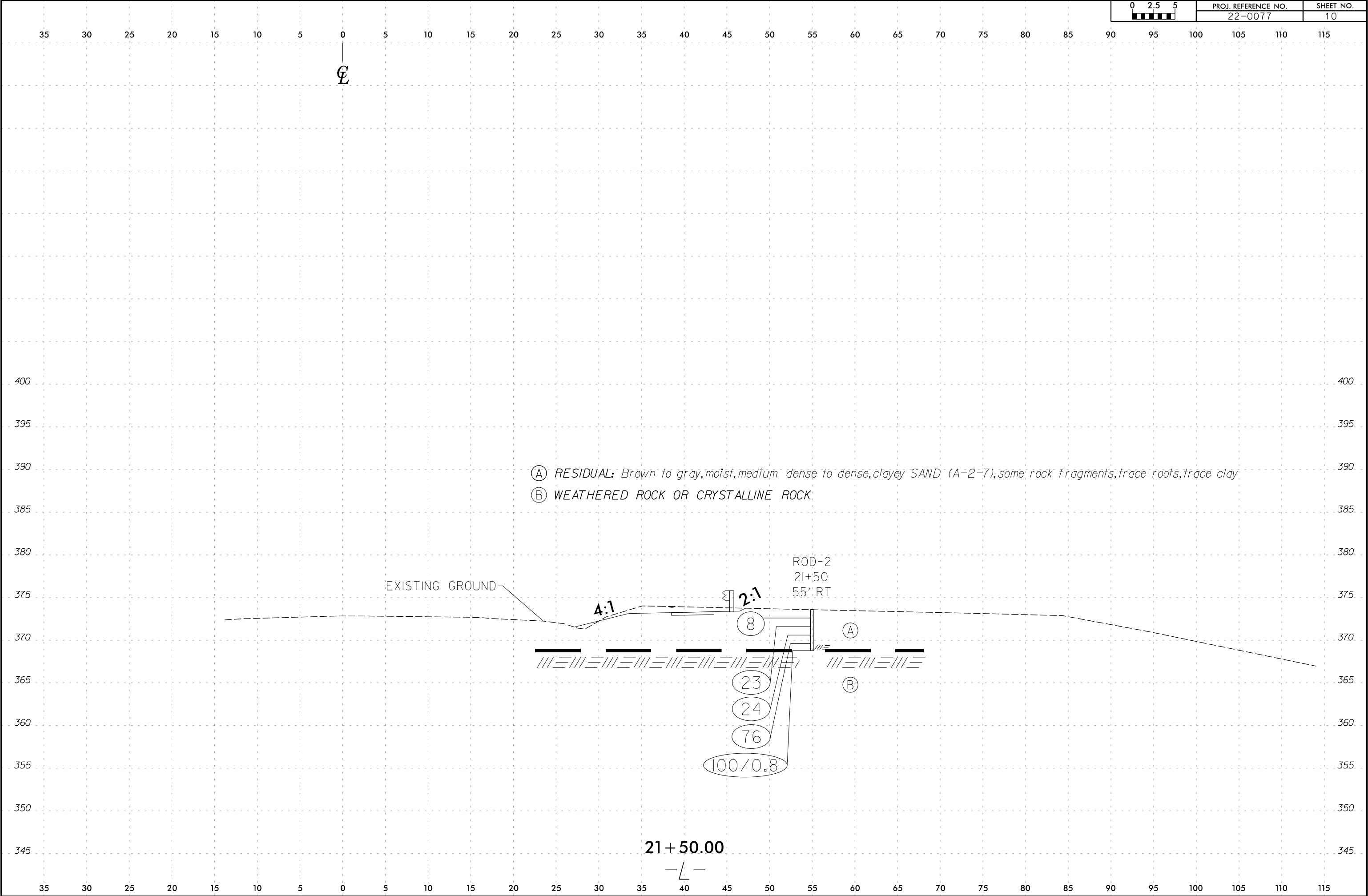
02.55	PROJ. REFERENCE NO.	SHEET NO.
	22-0077	9

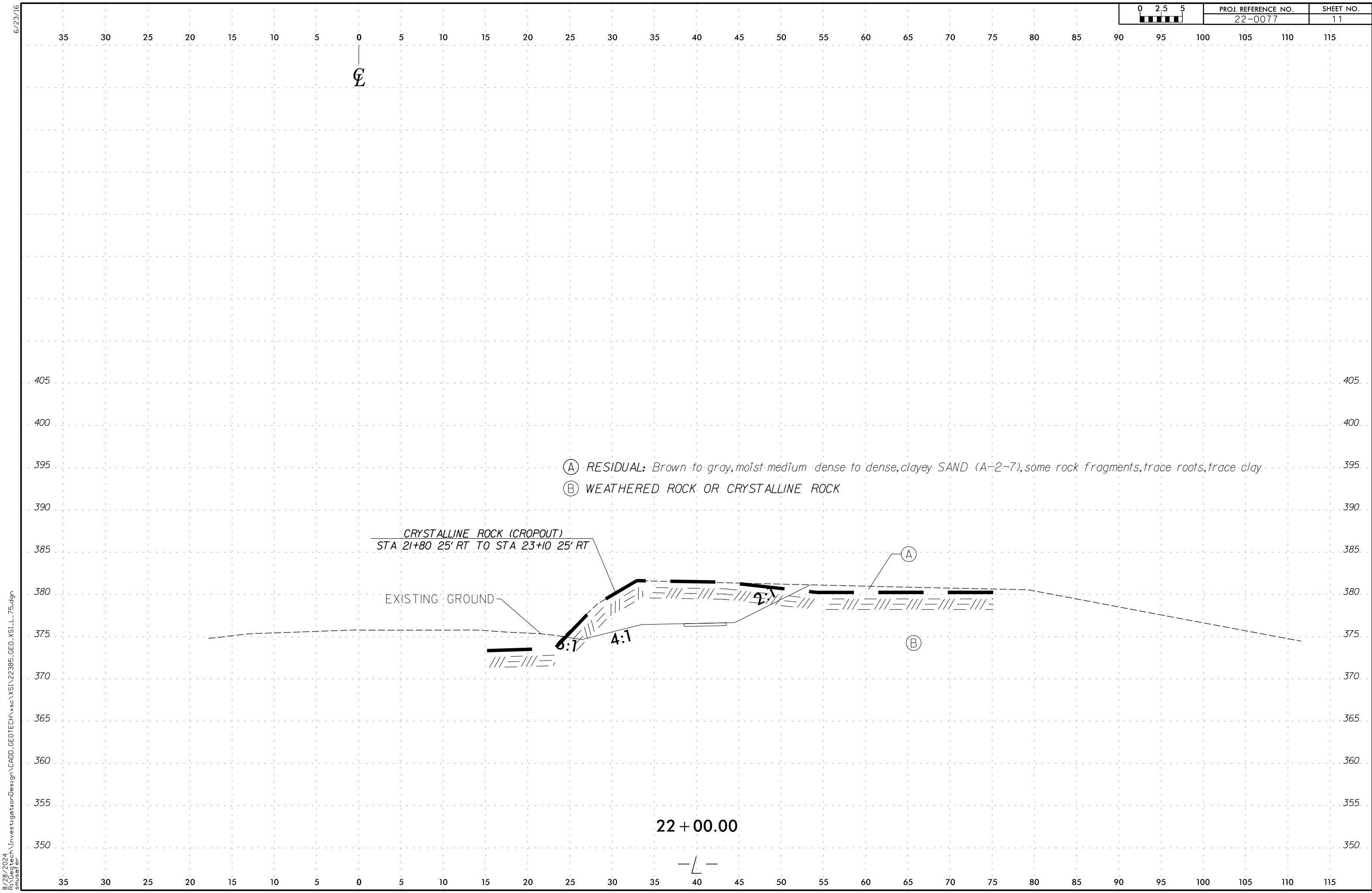


6/23/16

8/28/2024
Rt:Geotech\Investigation\Design\CADD_GEO\TECH\asc\XSI\22385_GEO.XSLL-75.dgn
anusafer

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	22-0077	10





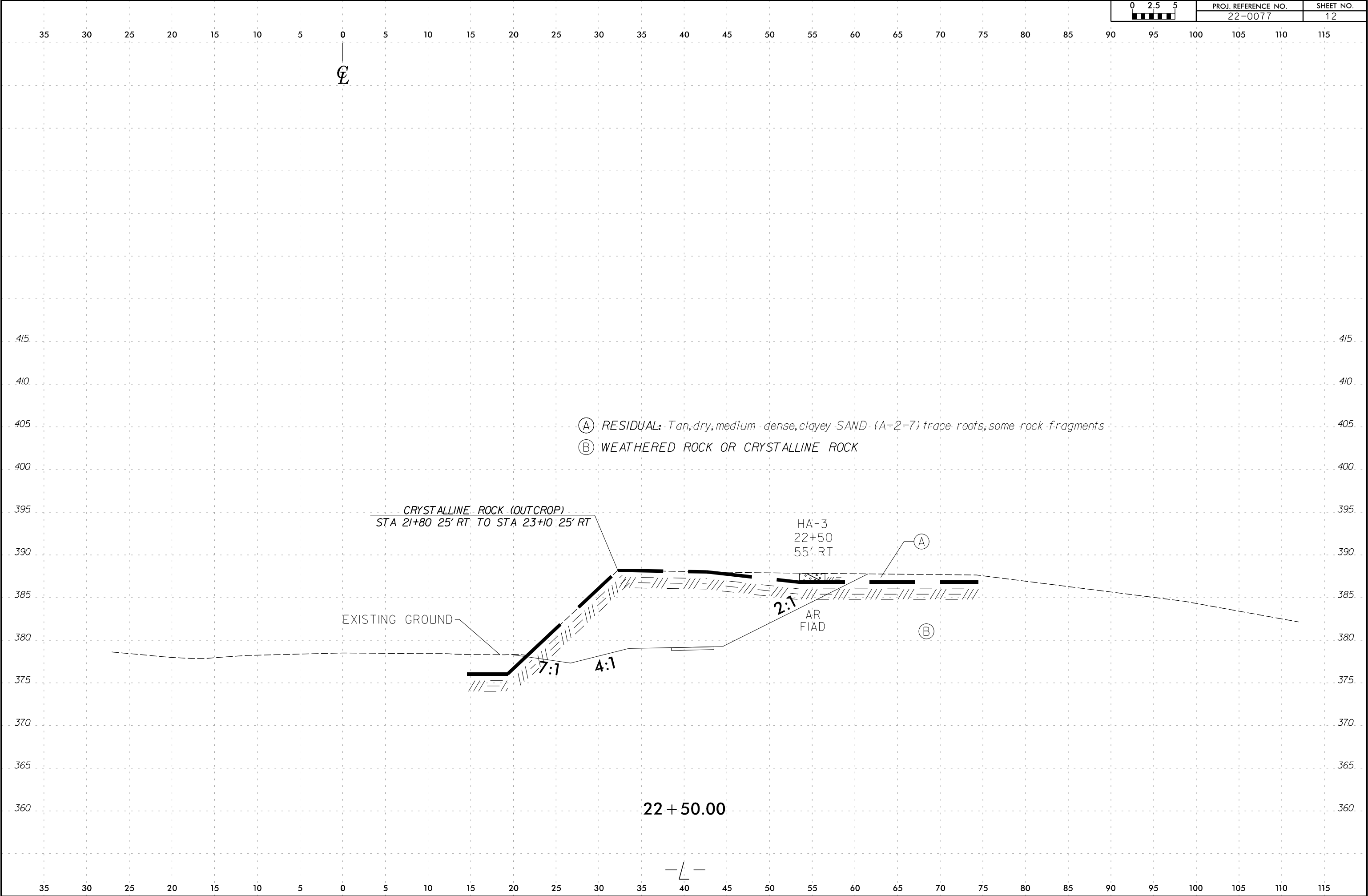
6/23/16
8/28/2024
Rt:Geotech\Investigation\Design\CADD_GEO\TECH\asc\XSI\22385_GEO_XS1.LL-75.dgn
ansal er

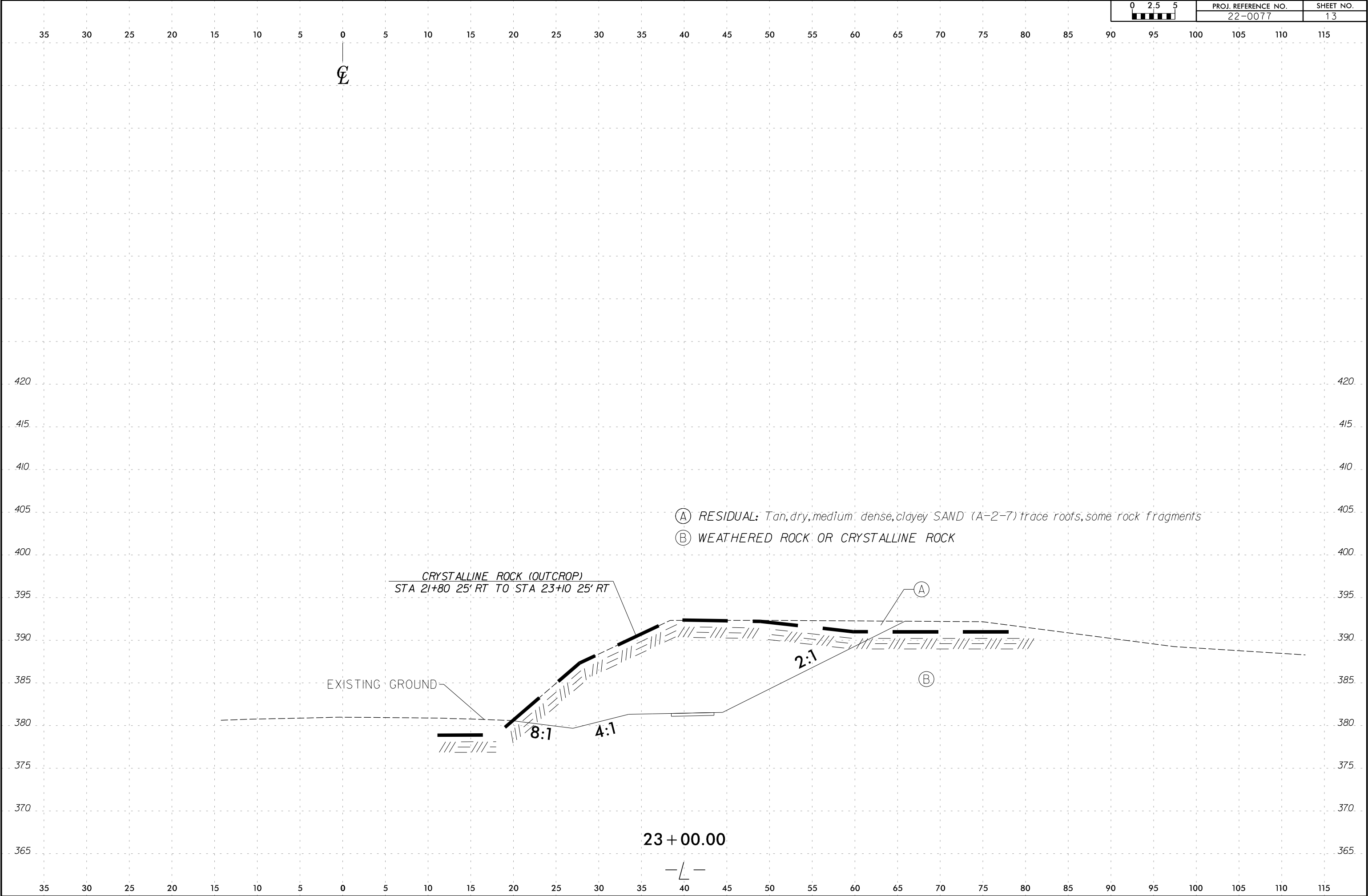
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	22-0077	11

6/23/16

8/28/2024
Rt:Geotech\Investigation\Design\CADD_GEO\TECH\asc\XSI\22385_GEO_XS1.LL-75.dgn
anusafer

PROJ. REFERENCE NO.			SHEET NO.	
22-0077			12	

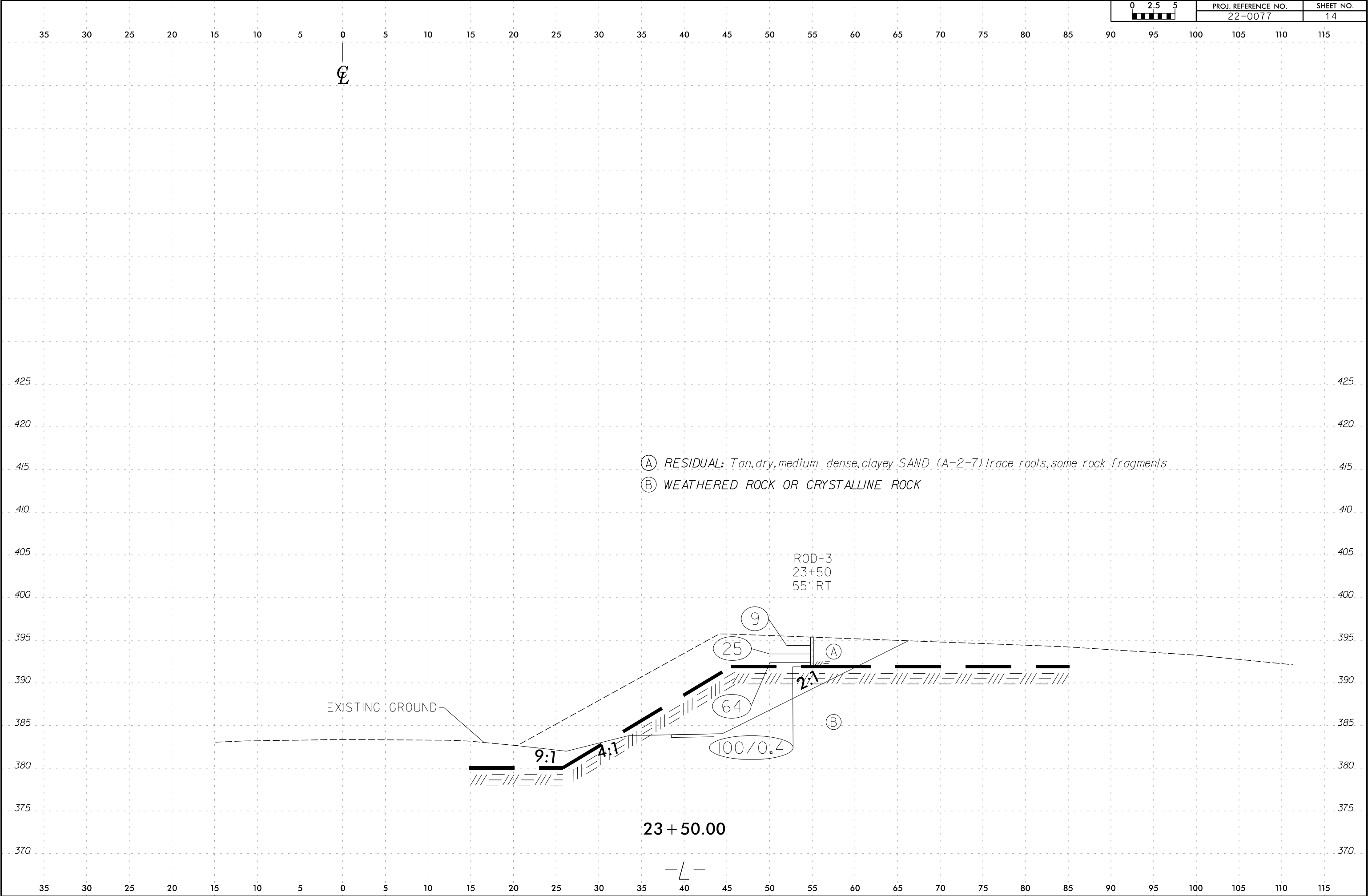


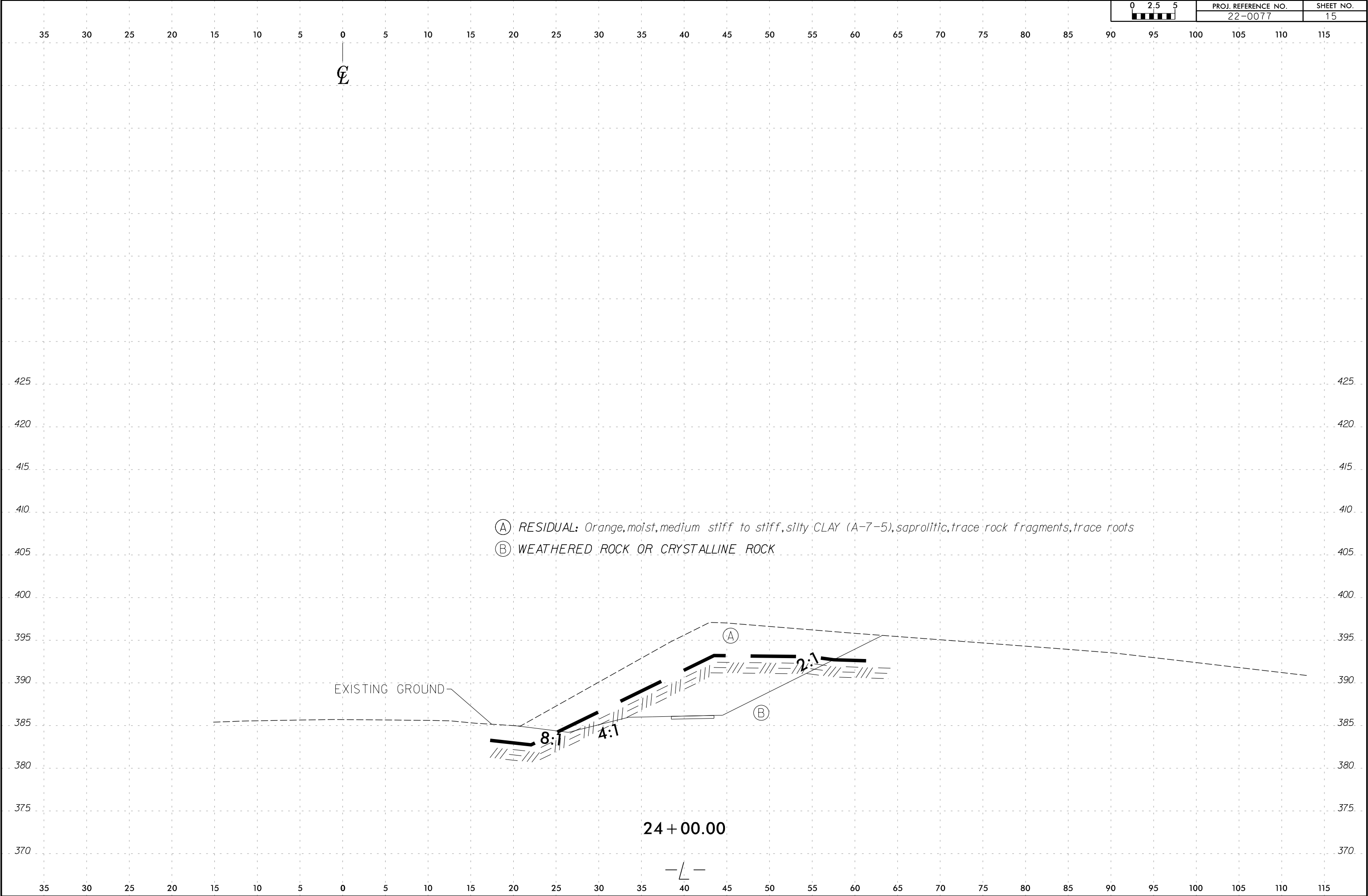


6/23/16

8/28/2024
Rt:Geotech\Investigation\Design\CADD_GEO\TECH\asc\XSI\22385_GEO.XSL.L-75.dgn
anusafer

02.55	PROJ. REFERENCE NO.	SHEET NO.
	22-0077	14

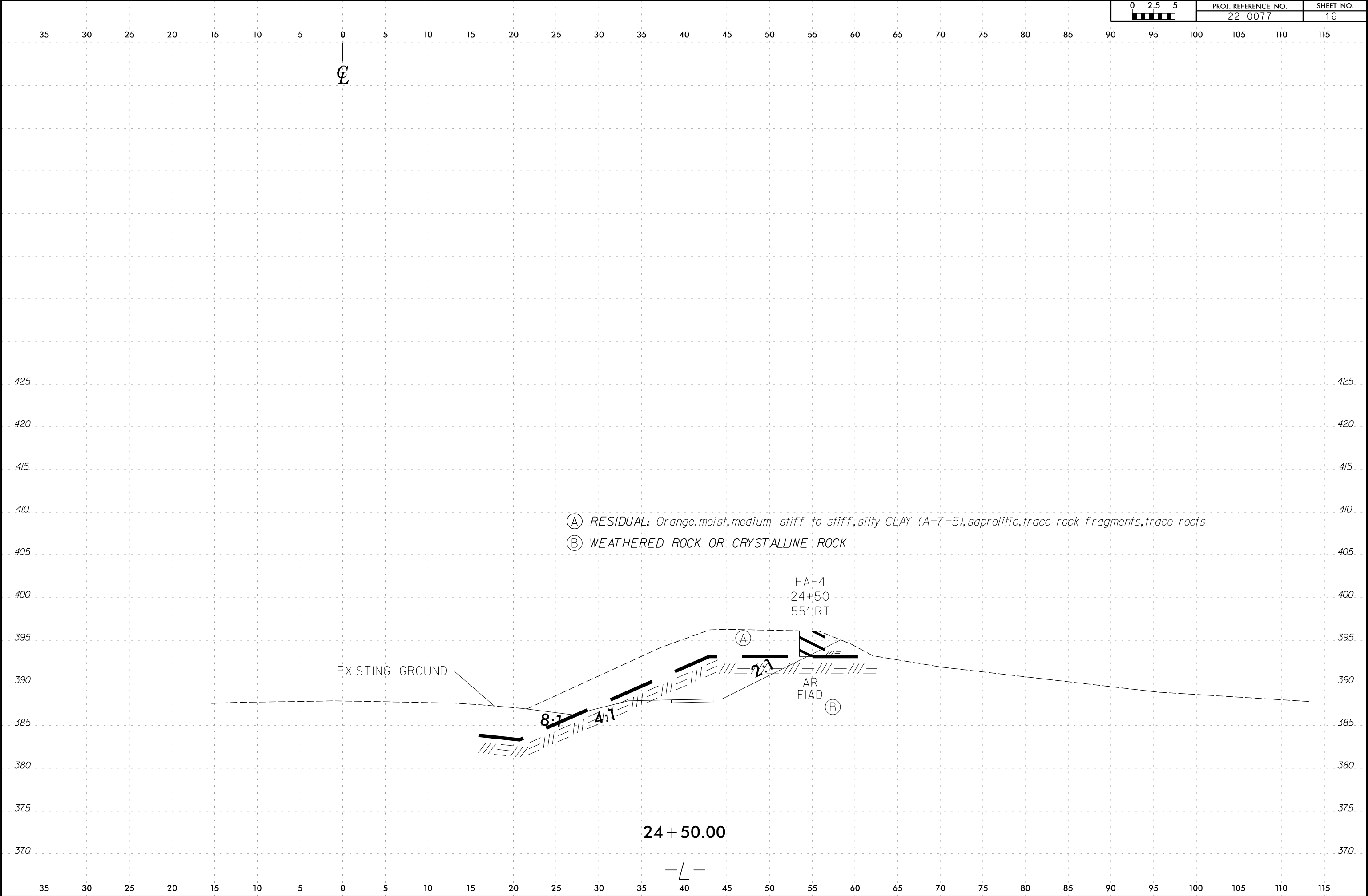


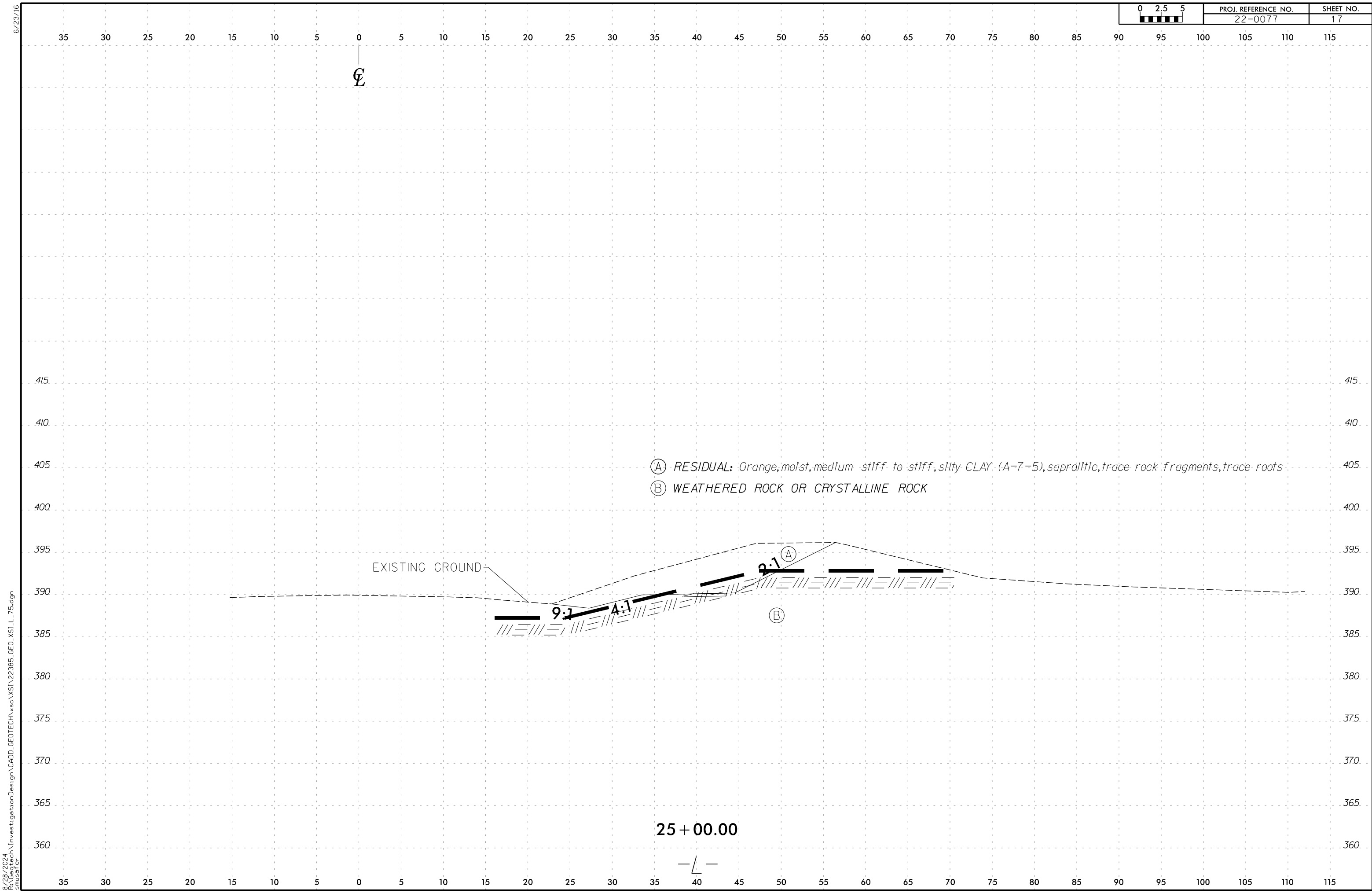


6/23/16

8/28/2024
Rt:Geotech\Investigation\Design\CADD_GEO\TECH\asc\XSI\22385_GEO.XSL.L-75.dgn
anusafer

02.55	PROJ. REFERENCE NO.	SHEET NO.
	22-0077	16



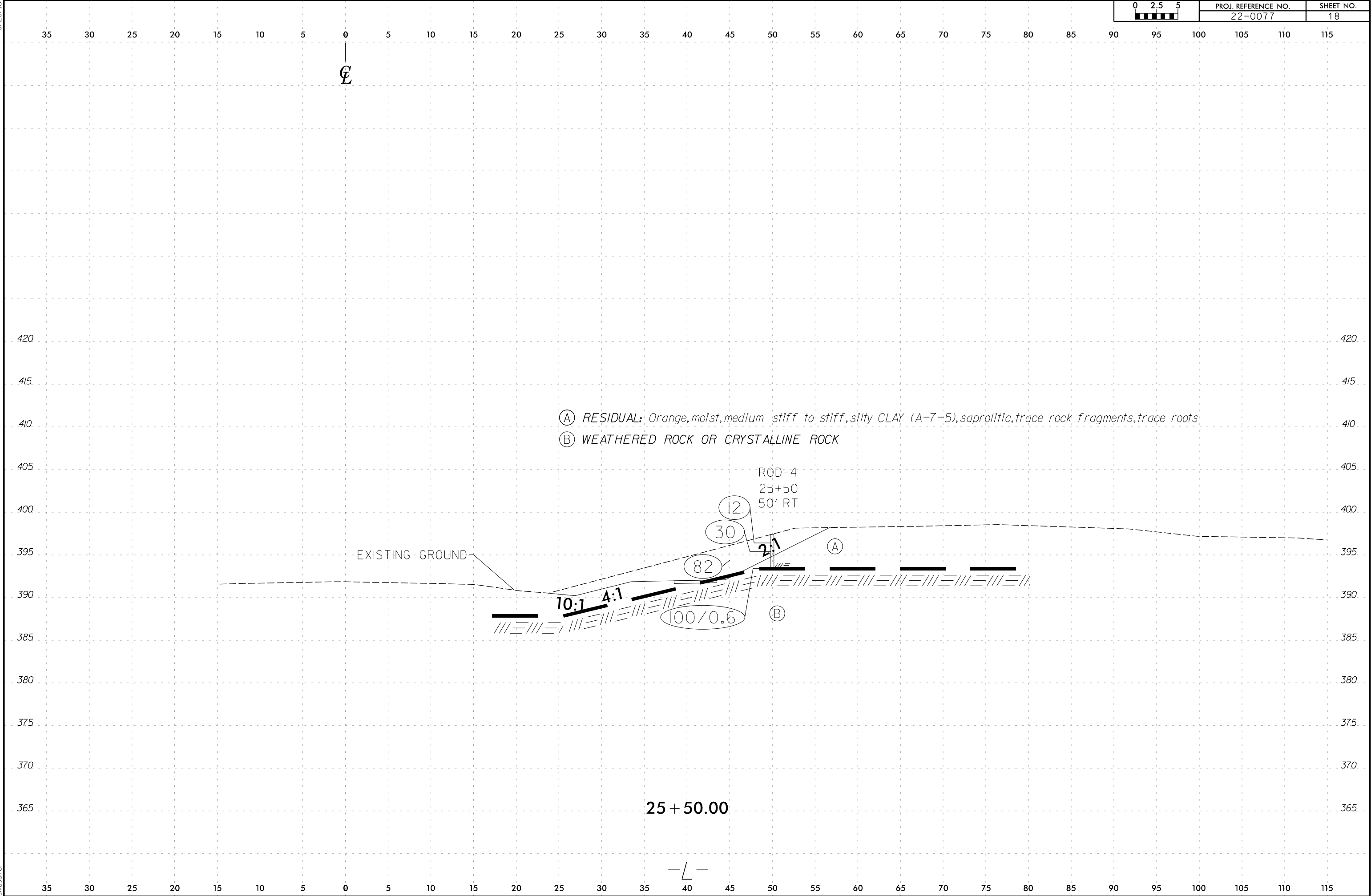


8/28/2024
Rt:Geotech\Investigation\Design\CADD_GEO\TECH\asc\XSI\22385_GEO_XS1.LL-75.dgn
anusafer

6/23/16

8/28/2024
R:\Geotech\Investigation\Design\CADD_GEO\TECH\XSC\XSI\22385_GEO.XSL.L-75.dgn
ansal er

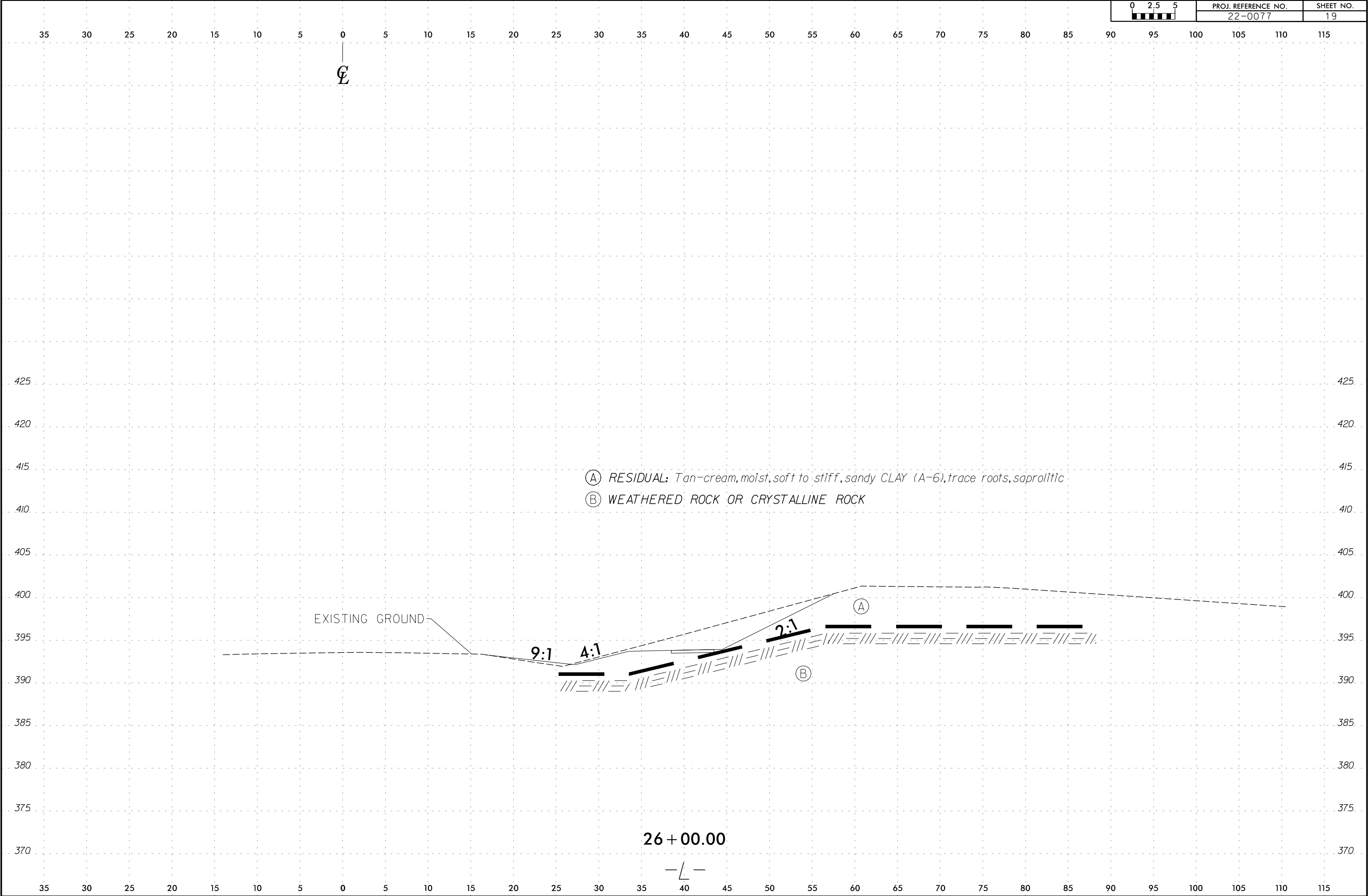
0 2.5 5 	PROJ. REFERENCE NO.	SHEET NO.
	22-0077	18



6/23/16

8/28/2024
Rt:Geotech\Investigation\Design\CADD_GEO\TECH\asc\XSI\22385_GEO_XSILL-75.dgn
ansal er

02.55	PROJ. REFERENCE NO.	SHEET NO.
	22-0077	19



6/23/16

8/28/2024
Rt:Geotech\Investigation\Design\CADD_GEO\TECH\asc\XSI\22385_GEO_XS1.L-75.dgn
ansal er

	PROJ. REFERENCE NO.	SHEET NO.
	22-0077	20

