Town of Kernersville Shields Rd. Waterline Relocation, Kernersville, NC 27284 Project Number 23-0333.004



Item #1 – The Bid Form (Pages 7–9) did not include the column that references the applicable NCDOT Standard Specifications or Special Provisions for each line item. The corrected Bid Form, with the specification reference column included, is attached and shall be used when submitting bids.

Item #2 – A line item for "Remove Fire Hydrant" has been added to the Bid Form (Pages 7–9) as line item # 19.

Item #3 – Replace the Project Special Provision "Temporary Shoring" with the following:

TEMPORARY SHORING:

Under Subarticle 1550-3(B) Design of the 2024 NCDOT Standard Specifications, an engineer licensed by the State of North Carolina will evaluate field conditions in accordance with Subarticle 1505-3(A) Shielding and Shoring, for the maintenance of traffic and certify that temporary shoring is not needed or provide a plan in accordance with the Subarticle for the maintenance of traffic. The evaluation, plan and design is incidental to the item Bore and Jack 16".

If the contractor's licensed engineer certifies that Temporary Shoring for the maintenance of traffic is not needed, this item will be eliminated. Otherwise, the contractor will install and maintain temporary shoring as required and will be paid under the line item, Temporary Shoring.

Pay Item Pay Unit

Temporary Shoring Lump Sum

The corrected specification will be included in the attached bid package (Page 37).

Pertinent Questions:

1. Does the unit price for the item "Utility Manholes" include the ring and cover?

Answer: Yes. The Utility Manholes item per each covers the work of providing and constructing the utility manhole as shown in the plans in accordance with Section 1525 in the 2024 NCDOT Standard Specifications and the Project Special Provisions in the bid package, including the manhole ring and cover.

2. How is unsuitable material handled if it is encountered with the excavation and backfilling of the waterline?

Answer: The 2024 NCDOT Standard Specifications, Section 1510, Water Lines, references Section 1505, Excavation, Trenching, Pipe Laying, and Backfilling for Utilities. Select Materials are covered under Section 1505 and representatives of Winston-Salem/Forsyth County Utilities confirm that Select Materials, Class III is acceptable backfill when unsuitable material is encountered. Please note that there is no separate measurement or payment for Select Material for Backfill per Section 1505-6 of the 2024 NCDOT Standard Specifications.

Link for Pre-Bid Meeting Recap:

https://summitdeinc-

my.sharepoint.com/:v:/g/personal/kaylee_fender_summitde_com/EQuoWEAEt31Jt10cxu6oXdwBeUaGkIvs-

<u>il3SELPueToKw?e=0Z11hm&referrer=Outlook.Desktop&referrerScenario=email-linkwithembed</u>

By signing below, I acknowledge that I have read and understand the content of the above addenda. I also agree that an executed copy must be included with my bid submittal.

Reviewed By:	Date:	

Town of Kernersville Shields Rd., Kernersville, NC 27284

CONTRACT PROPOSAL



PROJECT NUMBER: 23-0333.004

DESCRIPTION: Waterline relocation and site restoration. Includes asphalt pavement repair and the installation of a ductile iron water line and sewer line, wet tap & valves, fire hydrants, and a utility manhole.

BID OPENING: September 26th, 2025

NOTICE:

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 THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$50,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD OR SBE PROJECT. 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.

NAME OF BIDDER

N.C. CONTRACTOR'S LICENSE NUMBER

ADDRESS OF BIDDER

RETURN BIDS TO: TOWN OF KERNERSVILLE

134 EAST MOUNTAIN ST., KERNERSVILLE, NC 27284

ATTN: CHRIS JENSEN - TOWN ENGINEER



INSTRUCTIONS TO BIDDERS

- 1. The bid sheet with the proposal shall be used and shall not be altered in any manner. **DO NOT SEPARATE THE BID SHEET FROM THE PROPOSAL!**
- 2. All entries on the bid sheet, including signatures, shall be written in ink.
- 3. The Bidder shall submit a unit price for every item on the bid form. The unit prices for the various contract items shall be written in figures.
- 4. An amount bid shall be entered on the bid sheet for every item. The amount bid for each item shall be determined by multiplying each unit bid by the quantity for that item and shall be written in figures in the "Amount Bid" column of the sheet.
- 5. The total amount bid shall be written in figures in the proper place on the bid sheet. The total amount shall be determined by adding the amounts bid for each item.
- 6. Changes in any entry shall be made by marking through the entry in ink and making the correct entry adjacent thereto in ink. A representative of the Bidder shall initial the change in ink
- 7. The bid shall be properly executed. All bids shall show the following information:
 - a. Name of individual, firm, corporation, partnership, or joint venture submitting bid.
 - b. Name and signature of individual or representative submitting bid and position or title.
 - c. Name, signature, and position or title of witness.
 - d. Federal Identification Number (or Social Security Number of Individual).
 - e. Contractor's License Number (if Applicable).
- 8. Bids submitted by corporations shall bear the seal of the corporation.
- 9. The bid shall not contain any unauthorized additions, deletions, or conditional bids.
- 10. The bidder shall not add any provision reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
- 11. THE PROPOSAL WITH THE BID SHEET STILL ATTACHED SHOULD BE PLACED IN A SEALED ENVELOPE AND SHALL HAVE BEEN DELIVERED AND RECEIVED BY:

TIME: 2:00 P.M. DATE: SEPTEMBER 26TH, 2025

12. If delivered by mail, the sealed envelope shall be placed in another sealed envelope and the outer envelope shall be addressed as follows:

TOWN OF KERNERSVILLE
134 EAST MOUNTAIN ST.
KERNERSVILLE, NC 27284
ATTN: CHRIS JENSEN – TOWN ENGINEER

AWARD OF CONTRACT

The award of the contract, if it be awarded, will be made to the lowest responsible Bidder in accordance with Section 102 (excluding 102-2 and 102-11) of the NCDOT Standard Specifications for Roads and Structures 2024. The lowest responsible BIDDER will be notified that his bid has been accepted and that he has been awarded the contract. The Town of Kernersville reserves the right to reject any or all bids. No Bidder may withdraw their bid within 60 days after the date of the opening thereof.

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ADVERTISEMENT FOR BIDS

Sealed bids will be received until <u>September 26th</u>, <u>2025 at 2:00 P.M.</u> by the Town of Kernersville for the waterline relocation and site restoration at Shields Rd., Kernersville, NC 27284. Includes asphalt pavement repair and the installation of a ductile iron water line and sewer line, wet tap & valves, fire hydrants, and a utility manhole.

The required Bid Documents may be <u>mailed or hand delivered</u> to the address listed below before <u>2:00 P.M. on September 26th, 2025</u>. Upon request, 2 copies of the original documents will need to be submitted to the address listed below by the end of the following business day.

Town of Kernersville 134 East Mountain St., Kernersville, NC 27284 Attn: Chris Jensen – Town Engineer

A Pre-Bid meeting will be held on <u>September 17th, 2025 at 2:00 P.M.</u> The meeting will be hosted <u>in-person</u> by Summit Design and Engineering Services at the above address. Attendance is <u>not</u> mandatory but very encouraged. A virtual link to the meeting is available upon request if in-person attendance is not possible. Please contact Randall Moore, <u>randall.moore@summitde.com</u>, or Kaylee Fender, <u>kaylee.fender@summitde.com</u>, for the virtual meeting link.

The scope of work includes: Waterline relocation and site restoration.

Contractors offering proposals on this project must be licensed to do the specified type of contracting in the State of North Carolina.

Complete plans, specifications and contract documents will be open for inspection at Summit Engineering and Design Services, 320 Executive Court, Hillsborough, NC 27278. Copies of the contract, specifications and plans may be obtained by contacting **Randall Moore**, with Summit Design and Engineering Services at **919-732-3883**. Hard copies of these contract documents shall require a \$50.00 non-refundable payment. Summit accepts major credit cards and cashier's checks. Electronic copies are available at no charge by contacting **Randall Moore**, with Summit Design and Engineering Services at **919-732-3883**.

Minority and female owned businesses are invited and encouraged to bid. The goals for participation by minority firms as subcontractors on this project have been set at 10%.

INFORMATION FOR BIDDERS

1. <u>DEFINED TERMS</u>. Terms used in the Information for Bidders shall have the meanings assigned to them in the General Conditions and the Special Conditions. Additional terms are defined as follows:

Owner: Town of Kernersville 134 East Mountain Street Kernersville, NC 27284 Attention: Mr. Chris Jensen, Town Engineer Telephone: (336) 992-0605

Engineer: Summit Design & Engineering Services

320 Executive Court Hillsborough, NC 27278

Attention: Randall Moore Telephone: (919) 732-3883

- 2. <u>EXAMINATION OF CONTRACT DOCUMENTS AND SITE</u>. It is the responsibility of each Bidder, before submitting a Bid, to (a) thoroughly examine the Contract Documents, (b) visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the Work, (c) consider Federal, State and Local Laws and Regulations that may affect cost, progress, performance, or furnishing of the work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors, or discrepancies discovered by Bidder in the Contract Documents.
- 3. <u>INTERPRETATIONS AND ADDENDA</u>. All questions about the meaning or intent of the Bidding Documents and the Contract Documents shall be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda, mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than 10 days prior to the date for opening of Bids may not be answered. Only answers issued by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. Bidders should contact the Engineer not less than 72 hours before bid opening to secure any Addenda which may affect bidding.
- 4. <u>BID SECURITY</u>. Each Bid shall be accompanied by Bid Security in the form of cash, certified check payable to the Owner, or Bid Bond payable to the Owner; and equal to five (5%) percent of the Bidder's maximum Bid price (determined by totaling the Base Bid and all Alternates). Bid security of the apparent successful Bidder will be retained until Owner awards a Contract to such Bidder and has executed Contract Documents with such Bidder. Cash, checks or bid bonds will be returned to all except the three (3) lowest bidders within three (3) days after the opening of bids.
- 5. <u>WITHDRAWL OF BIDS</u>. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids. Withdrawal of a bid, after bids are opened, will only be permitted under the provisions of North Carolina laws and regulations.
- 6. <u>BIDS TO REMAIN SUBJECT TO ACCEPTANCE</u>. All Bids will remain subject to acceptance for the number of days set forth in the Bid Documents, but Owner may, in its sole discretion, release any Bid and return the bid security prior to that date.

- 7. <u>EVALUATION OF BIDS</u>. Bidders shall submit a Bid on a unit price basis as set forth in the Bid Form. The total of all estimated prices will be determined as the sum of the products of the estimated quantity of each item and the unit price Bid for the item. The final quantities and Contract Price will be determined in accordance with the General Conditions. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
- 8. <u>SIGNING OF AGREEMENT.</u> By submitting a Bid, the Contractor agrees to return signed Contract Documents with proper Bonds, Insurance Certificates, etc., within fourteen (14) calendar days of receipt. Should Contractor fail to return properly executed Contract Documents within the specified time, Owner may disqualify that Contractor and enter into contracts with the next highest bidder.
- 9. <u>SALES AND USE TAX.</u> Provisions for sales and use taxes are set forth in the General and Special Conditions. The Contractor will be required to submit statements on sales tax paid to the Owner as outlined in Division 1 "Applications for Payment".
- 10. <u>BONDS AND INSURANCE</u>. General Conditions, as may be modified by the Special Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by the Successful Bidder) to the Owner, it shall be accompanied by required bonds and insurance documentation.
- 11. <u>SAFETY</u>. Bidders shall provide at time of bid opening to Owner the following documents as evidence of the safety record of the Contractor:
 - a. OSHA 300A Log for the Bidder's Firm for the last 5 years.
 - b. Current Worker's Compensation Rating for Bidder's firm. Review of these records shall be a part of evaluating the bidder's qualifications and a poor safety record may be cause for rejection of bid.
- 12. QUANTITIES AND UNIT PRICES. Owner reserves the right to delete any bid item or items in the bid prior to awarding the contract, except such deletions shall not reduce the total bid by more than 25% unless mutually agreed upon. The Owner/Engineer reserves the right to make at any time after award of the contract such changes in quantities as are necessary to complete the project. Such changes in quantities shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as changed at the unit prices agreed to in the Proposal. The non-utilization or partial utilization of any bid item shall not serve as a claim for any contract or unit price adjustment as the Contractor shall be paid the unit price bid for the number of units actually installed.
- 13. <u>SUBSTITUTE OR "OR EQUAL' ITEMS.</u> The procedure for submission of any application for review of substitute or "or-equal" items by Contractor and consideration by Engineer is set forth in the General Conditions and as may be modified by the Special Conditions. The Contract, if awarded, will be based on materials and equipment indicated on the Drawings or specified in the Specifications. Application for review of substitute or "or equal" materials or equipment will not be considered by Engineer unless received by Engineer within 10 calendar days prior to the bid opening. Judgment concerning substitutes and "or-equal" reviews will be determined by the sole discretion of the Engineer.

BID DOCUMENT

Town of Kernersville – Shields Rd., Kernersville, NC 27284

Proposal of
(hereinafter called "BIDDER") organized and existing under the Laws of the State of North Carolina, doing business as
*, to
the <u>Town of Kernersville – Shields Road</u> (hereinafter called "OWNER").
*Insert "a corporation," "a partnership," or "an individual" as applicable.
In compliance with your Advertisement for BIDS, BIDDER hereby proposes to perform all WORK, in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices listed below.
By permission of this BID, each BIDDER certifies, and in the case of a joint BID, each party thereto certifies as to his own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDEF or with competitor.
BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the PROJECT within the specified consecutive calendar days thereafter, as provided in the General Conditions and the Bid Schedule. BIDDER further agrees to pay as liquidated damages the amount stated in the Bid Schedule for each consecutive calendar day work is done beyond the completion date, as provided in the General Conditions.
BIDDER acknowledges that they have: a. Visited and thoroughly examined the Site and studied all the drawings and technical data b. NOT solicited nor refrained any entity from bidding, and have NOT engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract
BIDDER agrees that should they fail to accept a Contract, if awarded to them, the cash, certified check, or Bid Bond shall become property of the Owner as ascertained as Liquidating Damages for such default.
BIDDER acknowledges receipt of the following ADDENDUM:
BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices or lump sum:

awarded on the basis of low bid.

NOTE: BIDS shall include sales tax and all other applicable taxes and fees. Contracts will be

If Bidder is: An Individual Name(type or print): By: ______(SEAL) Doing business as: Business address: Phone: Fax: A Partnership Partnership Name: _____(SEAL) (Signature of general Partner – attach evidence of authority to sign) Name(type or print): Business Address: Phone: ______Fax: _____ A Corporation Corporation Name: ______ State of Incorporation: _____ (General Business, Professional, Service, LLC) (Signature – attach evidence of authority to sign) Name(type or print): Title: ______Attest: _____ (CORPORATE SEAL) **Business Address:** _____Fax:____ Phone: Date of Qualification to do business:

A Joint Venture

Joint Venture Name:	
By:(Signature of joint venture partner – attach evidence of auth	(SEAL)
Name(type or print): Doing business as: Business address:	
Phone: Fax:	

TOWN OF KERNERSVILLE BID FORM SHIELDS RD., KERNERSVILLE, NC 27284

ITEM	SECTION	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT BID
1	800	Mobilization	1	LS		
2	SP	Erosion Control	1	LS		
3	SP	Site Restoration	1	LS		
4	SP	Traffic Control	1	LS		
5	607	Incidental Milling	70	SY		
6	654/SP	Asphalt Plant Mix, Pavement Repair	10	TNS		
7	SP	Flowable Fill, Pavement Repair	36	CY		
8	867	Fence Reset	466	LF		
9	1110	Advanced Warning Signs (Stationary)	96	SF		
10	1170/SP	Positive Protection	1	LS		
11	SP	12" Ductile Iron Water Line	1930	LF		
12	SP	Ductile Iron Water Pipe Fittings	860	LBS		
13	SP	Wet Tap & Valve	2	EA		
14	SP	Fire Hydrant Assembly	2	EA		
15	SP	Relocate Water Service	1	EA		
16	SP	8" Ductile Iron Sewer Line	70	LF		
17	SP	Utility Manhole	1	EA		
18	1530	Abandon 12" Utility Pipe	1875	LF		

19	1530	Remove Fire Hydrant	1	EA	
20	1540/SP	16" Encasement Pipe	60	LF	
21	1550/SP	Bore and Jack of 16"	60	LF	
22	SP	Temporary Shoring	1	LS	

TOTAL BID FOR PROJECT:

Signature_____

CONTRACTOR		
ADDRESS		
Federal Identification Number	Contractors License Number	
Authorized Agent	Title	
Signature	Date	
Witness_	Title	
Signature	Date	
	BE COMPLETED BY THE TOWN OF KERNERSY nce with Article 103-1 of the NCDOT Standar	
Reviewed by		(date)
CONTRACTOR		
ADDRESS		
	Contractors License Number_	
Authorized Agent		
	Title_	
Signature		

Date

THIS SECTION TO BE COMPLETED BY THE TOWN ENGINEER

(Date)

Attest:

LIST OF SUBCONTRACTORS

All Bidders shall provide the following information regarding all subcontractors.

Subcontractor	Address	Phone

Principal:			
Suratur		Name of Principal Contractor	
Surety:		Name of Surety	
Contract Number:	ntract Number: County:		
Date of Bid:			
and SURETY above sum of five (5) per which sum well and and severally, firmly	e named, are held and firmly bour cent of the total amount bid by the truly to be made, we bind ourselve by these presents.	e, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and unto the Department of Transportation in the full and just the Principal for the project stated above, for the payment of es, our heirs, executors, administrators, and successors, jointly is: the Principal shall not withdraw its bid within sixty (60)	
days after the opening Board of Transportation and the faithful performed equipment for the properties of the conditions and Transportation make contract. In the every days to comply with opened except as properties and additional documents.	ng of the bids, or within such other ation shall award a contract to the otice of award is received by him, nance of the contract and for the resecution of the work. In the ever ce with the provisions of Article 1 obligations of this Bid Bond shall es a final determination to either a not a determination is made to award the the requirements set forth above rovided in Article 103-3, or after ts as may be required and to provi	er time period as may be provided in the proposal, and if the e Principal, the Principal shall, within fourteen (14) calendar provide bonds with good and sufficient surety, as required for the protection of all persons supplying labor, material, and that the Principal requests permission to withdraw his bid due to 03-3 of the <i>Standard Specifications for Roads and Structures</i> , all remain in full force and effect until the Department of show the bid to be withdrawn or to proceed with award of the red the contract, the Principal shall have fourteen (14) calendar e. In the event the Principal withdraws its bid after bids are award of the contract has been made fails to execute such de the required bonds within the time period specified above, tely paid to the Department of Transportation as liquidated	
IN TESTIMONY W	HEREOF, the Principal and Suret	y have caused these presents to be duly signed and sealed.	
This the day	of, 20		
		Surety	
]	Ву	
		General Agent or Attorney-in-Fact Signature	
	Seal of Surety		
		Print or type Signer's Name	

CORPORATION

	Full name of Corpo	oration
		1'.0" 1
	Address as prequa	lified
	Ву	
	Signature of	President, Vice President, Assistant Vice President Select appropriate title
	<u>-</u>	
		Print or type Signer's name
	Affix Corporate S	'eal
Attest	- G.	
	Signature Select appropriate title	
	Print or type Signer's name	

LIMITED LIABILITY COMPANY

Name of Contractor

Full name of Firm

Address as prequalified

Signature of Member/
Manager/Authorized Agent

Individually

Print or type Signer's name

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

Name of Contractor	
	Individual Name
Trading and doing business as	
	Full name of Firm
_	Address as prequalified
Signature of Contractor	
_	Individually
	Print or type Signer's name
G. CM.	
Signature of Witness	
Print or type Signer's nar	ne

INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

Name of Contractor	
	Print or type Individual Name
	Address as prequalified
Signature of Contractor	Individually
	maividually
	Print or type Signer's name
	The or type organic and the
Signature of Witness	
Print or type Signer's name	

PARTNERSHIP

	F 11 CD /	1.
	Full name of Partne	ership
	Address as prequa	lified
	Address as prequa	imed
	Ву	Signature of Partner
		Signature of Farmer
		Print or type Signer's name
Signature of Witness		
Print or type Signer's name		

BID BOND JOINT VENTURE (2 or 3)

SIGNATURE OF CONTRACTORS (Principal)

Instructions to Bidders: **2 Joint Ventures**, Fill in lines (1), (2) and (3) and execute. **3 Joint Venturers** Fill in lines (1), (2), (3), (4) and execute. Line (1), print or type the name of Joint Venture. On line (2), print or type the name of one of the joint venturers and execute below in the appropriate manner required by Article 102-8 of the *Specifications*. On Line (3), print or type the name of second joint venturer and execute below in the appropriate manner required by said article of the Specifications. On Line (4), print or type the name of the third joint venturer, if applicable and execute below in the appropriate manner required by said article of the Specifications. This form of execution must be strictly followed.

	Name of Joint Ventu	ire
	Name of Contracto	r
	Address as prequalifi	ed
	ridaress as prequants	
Signature of Witness or Attest	Ву	Signature of Contractor
Print or type Signer's name		Print or type Signer's name
lf Corporation, affix Corporate Seal		
	and	
	N. CO. A. A.	
	Name of Contracto	
	Address as prequalifi	ed
Signature of Witness or Attest	Ву	Signature of Contractor
Print or type Signer's name		Print or type Signer's name
lf Corporation, affix Corporate Seal		
	and	
Name	of Contractor (for 3 Joint	Venture only)
	Address as prequalifi	ied
Signature of Witness or Attest	Ву	Signature of Contractor

If Corporation, affix Corporate Seal

PERFORMANCE BOND

DATE OF EXECUTION:	
NAME OF PRINCIPAL:(CONTRACTOR)	
NAME OF SURETY:	
NAME OF CONTRACTING BODY: Town of Kernersville –	Shields Rd., Kernersville, NC 27284
AMOUNT OF BOND:	
CONTRACT NUMBER	
KNOW ALL MEN BY THESE PRESENTS, THAT WE, the P bound unto the above named CONTRACTING BODY, hereir stated above for the payment of which sum well and truly to be r successors and assigns, jointly and severally, firmly by these p	nafter the Contracting body, in the penal sum of the amount made, we bind ourselves, our heirs, executors, administrators, resents.
THE CONDITION OF THIS OBLIGATION IS SUCH, that we the Contracting Body, numbered as shown above and hereto at	
NOW THEREFORE, if the PRINCIPAL shall well and truly conditions, and agreements of said contract during the original granted by the Contracting Body, with or without notice to the the contract, and shall also as well and truly perform and fu agreements as of any and all duly authorized modifications of modifications to the Surety being hereby waived, then, this of virtue. Should the PRINCIPAL fail to complete the undertaking pay the amount necessary to complete the work as provided in IN WITNESS WHEREOF, the above-bounden parties have expindicated above, the name and corporate seal of each corporate its undersigned representative, pursuant to authority of its government. [SEAL]	term of said contract and any extensions thereof that may be e Surety, and during the life of any guaranty required under lfill all the undertakings, covenants, terms, conditions and f said contract that may hereafter be made, notice of which obligation to be void; otherwise to remain in full force and ag as provided in the contract, then the Surety shall promptly the contract, up to the amount of the Bond specified herein. Recuted thus instrument under their several seals on the date party being hereto affixed and these presents duly signed by
•	·
Name and Title Name and Title	
Executed incounterparts.	Name of Principal (Contractor) By
Witness	(Print) (Signature)
	Owner, Partner, or Corp. Pres. or Vice President)

Attest: (Corporation)	
By (Print)	<u> </u>
(Signature)	<u> </u>
Title:	
(Corp. Sec. Or Assist. Sec.)	(Corporate Seal)
	(Surety Company)
Witness:	By: (Print)
By:(Print)	(Signature)
(Signature)	Title:
Countersigned:	Title:(Attorney-in-Fact)
N.C. Licensed Resident, Agent	
	(Surety Corporate Seal)
Name and Address - Surety Agency	
Surety Company Name and N.C. Regional or Branch Office Address	

PAYMENT BOND

DATE OF EXECUTION:				
NAME OF PRINCIPAL:				
(CONTRACTOR):				
NAME OF SURETY:				
NAME OF CONTRACTING BODY	: Town of Kernersville –	Shields Rd., Kernersy	ille, NC 27284	
AMOUNT OF BOND:				
CONTRACT NUMBER:				
KNOW ALL MEN BY THESE PRES bound unto the above named CONTI stated above for the payment of which successors and assigns, jointly and se	RACTING BODY, herein sum well and truly to be a	nafter the Contracting nade, we bind ourselve	body, in the penal sum of	f the amount
THE CONDITION OF THIS OBLIG the Contracting Body, numbered as sl			AL entered into a certain c	ontract with
NOW THEREFORE, if the PRINCIP prosecution of the work provided for may hereafter be made, notice of who otherwise to remain in full force and materials for the work, then the Suret	in said contract, and any ich modifications to the S virtue. Should the PRIN	y and all duly authoriz Surety being hereby w CIPAL fail to timely j	ged modifications of said of aived, then this obligation	contract that n to be void;
IN WITNESS WHEREOF, the above indicated above, the name and corporate undersigned representative, pursua	ate seal of each corporate	party being hereto aff		
(SEA	AL)	-	(SEAL)	
Principal		Surety		
Name and Title		Name and Title		
Executed in	counterparts.	ne of Principal (Contra	ator)	
Witness	By	(Print)	_	
		(Signature)		
	Title:			
	(Owr	ner, Partner, or Corp. Pres. or Vice Presiden		

Attest: (Corporation)	
Ву	
(Print)	
(Signature)	
Title:	
(Corp. Sec. Or Assist. Sec.)	(Corporate Seal)
	(Surety Company)
Witness:	By:
Ву	(Filmt)
(Print)	(Signature)
(Signature)	
	Title: (Attorney-in-Fact)
	(Attorney in Fact)
Countersigned:	
N.C. Licensed Resident, Agent	
	(Surety Corporate Seal)
Name and Address - Surety Agency	
Surety Company Name and N.C. Regional or Branch Office Address	

CONSTRUCTION CONTRACT AGREEMENT

THIS AGREEMENT is entered into this the day of, 20, by and between the Town of Kernersville whose address is 134 East Mountain Street, Kernersville, NC 27284 ("Owner") and, a North Carolina Corporation ("Contractor"), whose address is and provides as follows:
WITNESETH:
WHEREAS, the Owner has identified Contractor as capable of doing the work described herein below;
WHEREAS, the parties wish to enter into a written agreement memorializing certain terms of the agreement.
NOW, THEREFORE, in consideration of the sum set forth herein below, the parties agree as follows:
1. The Owner hereby contracts with Contractor to do the following work for the Project described below (the "Work"):
See Contract Proposal,
Said Work is to be performed at the following location(s):
See Contract Proposal.
2. Contractor shall complete the Work in a good and workmanlike manner in accordance with general industry standards. Contractor shall complete the Work in accordance with the Contract Time and Intermediate Contract Time provisions established in the Contract Proposal. In the event that the Work is not completed in accordance with the Contract Time and Intermediate Contract Time, the Contractor shall pay liquidated damages as prescribed in the provisions, which sum shall not be considered a penalty but as a fair and reasonable estimate of the amount of damages incurred by the Owner if the Work is not completed by the Completion Date. The parties recognize and agree that the actual amount of damages would be difficult or impossible to ascertain.
3. The Owner shall pay the Contractor pursuant to the Total Estimate set out in the Proposal, which total cost will not exceed \$ for the Work; provided, however, that if conditions are encountered that require additional materials above the allowances noted in the Proposal, those materials shall be billed at the prices set out in the Proposal. Said amounts shall be payable as follows: within 30 days of receiving an invoice from Contractor requesting payment following completion of the Work (unless any amount is in

4. The Work contemplated by this Agreement shall be performed as set out in the attached proposal. The Owner may cancel this contract at any time upon written notice. The Owner shall pay the Contractor in accordance with Paragraph 3 through the date of cancellation.

form W-9 and other necessary forms required by applicable law have been completed.

dispute). All invoices shall specify the amount paid for labor, materials, and any applicable taxes including, but not limited to, sales taxes. Any sales taxes shall specify the entity (state or local) to whom taxes are paid and the amount of taxes paid to said entity. If any amount owed under the terms hereof is disputed, the Owner shall pay Contractor the amount not in dispute and shall retain the disputed amount until such time as the dispute is settled or a judgment is entered in accordance with applicable law. No payments shall be made to contractor until IRS

5. The Contractor shall purchase and maintain during the life of this Agreement, with an insurance company acceptable to the Owner, authorized to do business in the State of North Carolina, the following insurance:

AUTOMOBILE LIABILITY - Bodily injury and property damage liability insurance covering all owned, non-owned, and hired automobiles with a combined single limit each accident of \$1,000,000.00. The automobile liability insurance coverage amounts may be satisfied with a combination of primary and excess/umbrella coverage.

COMMERCIAL GENERAL LIABILITY - Bodily injury and property damage liability shall protect the contractor, and any subcontractor performing work under this contract, from claims of bodily injury or property damage which arise from operation of this contract, whether such operations are performed by contractor, any subcontractor, or anyone directly or indirectly employed by either. The amounts of such insurance shall not be less than \$1,000,000 bodily injury each occurrence/\$2,000,000 aggregate and \$1,000,000 property damage each occurrence/\$2,000,000 aggregate. This insurance shall include coverage for products/completed operations, personal and advertising injury liability and contractual liability in an amount not less than \$1,000,000 each occurrence/\$2,000,000 aggregate. The liability insurance coverage amounts may be satisfied with a combination of primary and excess/umbrella coverage.

WORKERS' COMPENSATION - Meeting the statutory requirements of the State of North Carolina, even if not required by law to maintain such insurance. Said Workers' Compensation insurance shall have at least the following limits: Employers Liability - \$100,000 per accident limit, \$500,000 disease per policy limit, \$100,000 disease each employee limit.

Original certificates of such insurance will be furnished and shall contain the provision that the Owner will be given thirty (30) days written notice of any intent to amend or terminate by either the Contractor or the insuring company. The Owner shall be listed as Additional Insured.

- 6. Contractor agrees to protect, defend, indemnify and hold the Owner, its employees, agents and elected and appointed officials harmless from any and all liability arising out of or in any way connected with the activities of the Contractor, Contractor's employees, agents, sub-contractors and anyone else working for or on behalf of Contractor arising out of or from the Work.
- 7. Any notice or other communication required or permitted under this Agreement shall be in writing and shall be deemed given as of (a) the date it is delivered by hand to the parties listed below; (b) the date three days following the date it is deposited in the mail, postage prepaid, return receipt requested, addressed to the parties listed below; or (c) the date three days following the date it is sent, shipping prepaid, return receipt requested, by a national courier service, addressed to the parties listed below:

OWNER:

Town of Kernersville 134 East Mountain Street Kernersville, NC 27284

CONTRACTOR:

- 8. Neither party may assign, delegate or otherwise transfer any of its rights or obligations under this Agreement without the prior written consent of the other party.
- 9. Except as herein specifically provided otherwise, this Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors. It is expressly understood and agreed that the enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Contractor and the Owner. Nothing contained in this document shall give or allow any claim or right of action whatsoever by any other third person. It is the express intention of Contractor and the Owner that any such person or entity, other than Contractor and the Owner, receiving services or benefits under this Agreement shall be deemed an incidental beneficiary only.
- 10. This Agreement and the following constitutes the entire agreement of the parties with respect to the subject matter hereof and are occasionally referred to herein as the "Contract Documents": A. Contract Proposal, B. Project Special Provisions, and C. Standard General Conditions of the Construction Contract. This Agreement shall supersede, terminate and replace any prior agreements for these services entered into by the parties. This Agreement merges all prior discussions among the parties and no party shall be bound by conditions, definitions, warranties, understandings, or representations concerning such subject matter except as provided in this Agreement or as may be specified later in writing and signed by properly authorized representatives of the parties.
- 11. The failure of a party in any instance to insist upon the strict performance of the terms of this Agreement shall not be construed to be a waiver or relinquishment of any of the terms of this Agreement, either at the time of the party's failure to insist upon strict performance or at any time in the future, and such term or terms shall continue in full force and effect.
- 12. The construction and performance of this Agreement shall be governed by and construed pursuant to the laws of the State of North Carolina. Venue for any legal actions initiated concerning this Agreement or arising in any way from and out of this Agreement shall be brought in the appropriate state court sitting in Forsyth County, North Carolina, having jurisdiction over said claim, or in the United States District Court, North Carolina Eastern District, as appropriate. The parties waive any right they may have to venue in any other jurisdiction.
- 13. Each clause of this Agreement is a distinct and severable clause; and if any clause is deemed illegal, void or unenforceable, the validity, legality and/or enforceability of the remaining clauses or portion of this Agreement shall not be affected thereby.
- 14. If any party shall be delayed or prevented from the performance of any act required by this Agreement by reason of acts of God; strikes, lockouts, labor troubles, inability to procure materials or other cause, without fault and beyond the reasonable control of the party obligated (financial inability excepted), performance of such act shall be excused for the period of the delay, and the period for the performance of any such act shall be extended for a period equivalent to the period of such delay.
- 15. Neither party shall be considered the drafter of this Agreement. No provision shall be interpreted for or against either party because that party or that party's legal representative drafted such provision.
- 16. Any amendment to this Agreement shall be in writing and duly executed by appropriate representatives of each of the parties.
- 17. By signing below the parties hereto certify that they have read the entire contents of this Agreement; have individually been afforded sufficient opportunity to obtain independent legal advice prior to executing this Agreement;

fully understand the provisions set forth in this Agreement and acknowledge that each term, condition and provision is fair and reasonable; and, that each party has received a signed copy of this Agreement.

18. That to facilitate execution, this document may be executed by handwritten signing or by electronically transmitted facsimile of such signing, either of which shall create a validly executed document, in as many counterparts as may be required.

[Remainder of Page Intentionally Left Blank; Signature Page Follows]

Attest:	Town of Kernersville	
	By	_
(Print Name and Title)	Chris Jensen (Town Engineer)	-
Contractor:		
Ву		
	(Print Name and Title)	

IN WITNESS WHEREOF, the parties have entered into this Agreement the day and year first above

written.

GENERAL PROVISIONS

This contract is for the following: Waterline relocation and site restoration for the Town of Kernersville – Shields Rd., Kernersville, NC 27284. Includes asphalt pavement repair and the installation of a DIP water line and sewer line, wet tap & valves, fire hydrants, and a utility manhole. All work and materials shall be in accordance with the provisions of the General Guidelines of this contract, the Project Special Provisions, the North Carolina Department of Transportation NCDOT 2024 Standard Specifications for Roads and Structures, and the North Carolina Department of Transportation Roadway 2024 Standard Drawings.

The approved NCDOT Encroachment documents are attached and a part of this bid package. A copy of the Encroachment should be kept on the project at all times.

The Contractor shall keep himself fully informed of all Federal, State and local laws, ordinances, and regulations, and shall comply with the provisions of Section 107 of the NCDOT Standard Specifications.

CONTRACT TIME AND LIQUIDATED DAMAGES

The date of availability for this project will be the date of the Notice to Proceed. The Contractor may begin work prior to this date upon approval of the Engineer or his duly authorized representative. If such approval is given, and the Contractor begins work prior to the date of availability, Town of Kernersville will assume no responsibility for any delays caused prior to the date of availability by any reason whatsoever, and such delays, if any, will not constitute a valid reason for extending the completion date. No work will be permitted, and no purchase order will be issued until all required bonds and prerequisite conditions and certifications have been satisfied.

The completion date for this project will be 12 weeks after a Notice to Proceed has been issued. No extensions will be authorized except as authorized by Article 108-10 of the NCDOT 2024 Standard Specifications.

Liquidated damages for this contract are Six Hundred Dollars (\$600.00) per calendar day.

PROSECUTION OF WORK AND LIQUIDATED DAMAGES

The provisions of section 108 of the 2024 NCDOT Standard Specifications shall apply with the following additions:

The Contractor will be required to pursue the work in a continuous and uninterrupted manner from the time he begins the work until completion and final acceptance of the work. The Contractor will not be permitted to suspend his operations except for reasons beyond his control or except where the Engineer has authorized a suspension of the Contractor's operations in writing. In the event that the Contractor's operations are suspended in violation of the above provisions, the sum of **Five Hundred Dollars**

(\$500.00) will be charged to the Contractor for each and every calendar day that such suspension takes place. The said amount is hereby agreed upon as liquidated damages due to extra engineering and maintenance costs and due to increased public hazard resulting from a suspension of the work. Liquidated damages chargeable due to suspension of the work will be additional to any liquidated damages that may become chargeable due to failure to complete the work on time.

PUBLIC NOTIFICATION

The Contractor should provide the Engineer a construction schedule at least two weeks prior to beginning the proposed work so that public notification can be placed. The Engineer shall also provide a notice to the Forsyth County Maintenance Office at (336) 896-2350 no less than three (3) business days prior to the commencement of construction. The Contractor must also contact the appropriate Utility Companies and make arrangements to adjust or relocate any utilities that conflict with the proposed work and/or to notify them of construction to prevent damage or interruption. Once construction is complete, the Engineer shall notify the Forsyth County Maintenance Engineer's Office within two (2) business days of completion to schedule an inspection.

DAY RESTRICTIONS

The Contractor should coordinate with the Town of Kernersville and inspection staff regarding local events in which lane closures will <u>not</u> be permitted to be installed. The following dates have already been outlined in which lane closures will <u>not</u> be permitted on:

September 5th, October 11th & 31st, and November 1st

Please note, additional events that are not included in this provision could be added in the future.

No utility work will be allowed on state holidays from 7:00 PM the night before through 9:00 AM the day prior to or following without prior approval from the Engineer.

TIME RESTRICTIONS

All lanes of traffic are to be open during any times of inclement weather and during the hours of:

Monday through Friday from 7:00 AM to 9:00 AM

Monday through Friday from 4:00 PM to 6:00 PM

Nighttime and weekend operations will NOT be allowed without written approval from the Engineer.

If the construction is within 1000 feet of a school location or designated bus route, the construction shall be coordinated with the school start and end times to avoid traffic delays.

USE OF SITE

Contractor shall make it their best effort to confine construction equipment, temporary construction facilities, storage of materials and equipment, and the operations of the workers to the Site and not unreasonably encumber the Site. Contractor should also keep the Site and roadway area free from accumulations of waste, materials, rubbish, and other debris and properly remove all surface encumbrances which may create a hazard. Warning systems, such as barricades or signals, should be employed for mobile equipment or surface hazards. All utility access points shall not be placed in the ditch line, side slopes of the ditches, or in the pavement. Excavation material shall not be placed on the pavement either. Any pavement and/or pavement markings that are damaged shall be re-surfaced and/or replaced to the satisfaction of the Engineer at no cost to the Owner.

DISPUTE RESOLUTION

Either the Owner or the Contractor may seek such remedies as are available to it by law for any disputes which they are unable to mutually resolve, and the venue for any legal action shall be in the court with jurisdiction over the matter in Forsyth County, NC.

TWELVE MONTH GUARANTEE

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 the Town of Kernersville. The Contractor will not be responsible for damage due to faulty design, normal wear and tear, for negligence on the part of the Town of Kernersville, and/or for use in excess of the design.

This guaranteed 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. 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 the Town of Kernersville 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.

PROJECT SPECIAL PROVISIONS

EROSION AND SEDIMENT CONTROL:

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 in accordance with a National Pollution Discharge Elimination System (NPDES) general permit NCG010000 administered by the North Carolina Department of Environmental Quality.

Establish a chain of responsibility for operations and subcontractors' operations to ensure that the *Erosion and Sediment Control (E&SC)* is implemented and maintained over the life of the contract.

Roles and Responsibilities

- (A) Designate an E&SC supervisor who shall be responsible for ensuring the erosion and sediment control is adequately implemented and maintained on the project and for conducting the quality control program. The E&SC 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 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 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 **Summit Design & Engineering Services**.
 - (c) Attend all construction meetings to discuss the findings of the NPDES inspection and other E&SC related issues.
 - (d) Implement the approved erosion and sediment control plans.
 - (e) Conduct all erosion and sediment control work in a timely and workmanlike
 - (h) Fully perform and install erosion and sediment control work prior to any suspension of the work.
 - (i) Coordinate with Federal and State agencies on resolution of erosion and sediment control 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 project limits.
 - (k) Have available a set of erosion and sediment control 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 the necessary plan and field changes for use and

review by **Summit Design & Engineering Services** as well as regulatory agencies.

- (2) Oversee compliance with the requirements set forth under the NPDES *NCG010000*, *General Permit to Discharge Stormwater for Construction Activities*, and for construction activities disturbing one or more acres of land. 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 devices 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 to record rainfall amounts and dates.
 - (d) Maintain erosion and sediment control inspection records for review by **Summit Design & Engineering Services** and Regulatory personnel upon request.
 - (e) Provide secondary containment for bulk storage of liquid materials.
 - (h) Provide training for employees concerning general erosion and sediment control awareness, and the requirements of the *General Permit, NCG010000*.
 - (i) Report violations of the NPDES permit to **Summit Design & Engineering Services** 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 comply with the E&SC plans and requirements of the NCG010000 permit.
 - (c) Notify **Summit Design & Engineering Services** when the required certified erosion and sediment control 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 directed by the Division of Energy, Mineral, and Land Resources Regional Engineer or their designee.
- (j) The Contractor's quality control and inspection procedures shall be subject to review by **Summit Design & Engineering Services**. Maintain NPDES inspection records and always make records available for verification by **Summit Design & Engineering Services**.

Measurement and Payment

All work described within this provision and the role of E&SC supervisor will be included in the compensation for Erosion Control, including and not limited to #57 Stone, Rip Rap, Silt Fence, and the maintenance of the same for the duration of the project.

Pay Item Pay Unit

Erosion Control Lump Sum

SITE RESTORATION:

Restore all disturb areas along the project to their natural contour including any staging or storage area and seed and mulch in accordance with the plans and Section 1660 of the NCDOT 2024 Standard Specifications for Roads and Bridges.

Restore areas of asphalt and concrete curb and gutter to original or better condition in accordance with the plans and the NCDOT 2024 Standard Specifications for Roads and Bridges.

Pay Item Pay Unit

Site Restoration Lump Sum

TRAFFIC CONTROL AND WORK ZONE SAFETY:

The Contractor shall maintain traffic during construction and provide, install, and maintain all traffic control devices in accordance with these project guidelines, the Project Special Provisions, North Carolina Department of Transportation (NCDOT) 2024 Standard Specifications for Roads and Structures, NCDOT 2024 Roadway Standard Drawings and the current edition of the Manual of Uniform Traffic Control Devices (MUTCD). The Contractor shall utilize complete and proper traffic controls and traffic control devices during all operations. All traffic control and traffic control devices required for any operation shall be functional and in place prior to the commencement of that operation. Signs for temporary operations shall be removed during periods of inactivity. The Contractor is required to leave the project in a manner that will be safe to the traveling public and which will not impede motorists. Traffic movements through lane closures on roads with two way traffic shall be controlled by flaggers stationed at each end of the work zone. In situations where sight distance is limited, the Contractor shall provide additional means of controlling traffic, including, but not limited to, two-way radios, pilot vehicles, or additional flaggers. Flaggers shall be competent personnel, adequately trained in flagging

procedures, and furnished with proper safety devices and equipment, including, but not limited to, safety vests and stop/slow paddles. All personnel when working in traffic areas or areas in close proximity to traffic shall wear an approved safety vest, or shirt or jacket which meets the color requirements of the Manual of Uniform Traffic Control Devices (MUTCD). The Contractor shall comply with all applicable Federal, State, and local laws, ordinances, and regulations governing safety, health, and sanitation, and shall provide all safeguards, safety devices, and protective equipment, and shall take any other needed actions, on his own responsibility that are 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. The movement of equipment from one map to the other will be performed in such a way as not to effect traffic flow and in accordance with the MUTCD. The contractor will be responsible for the repair of any damages to the existing pavement resulting from these equipment moves. Failure to comply with any of the requirements for safety and traffic control of this contract shall result in suspension of work as provided in Article 108-7 of the Standard Specifications. Any work requiring equipment or personnel within 5 feet of the edge of any travel lane of an undivided facility and within 10 feet of the edge of any travel lane of a divided facility shall require a lane closure with appropriate tapers per current NCDOT Roadway Standard Drawings or MUTCD.

Work Zone Traffic Control Qualifications and Training Program

All personnel performing any activity inside the highway right of way are required to be familiar with the NCDOT Maintenace/Utility Traffic Control Guidelines (MUTCG). No specific training course or test is required for qualification in the Maintenance/Utility Traffic Control Guidelines (MUTCG). The guidelines can be found at:

https://connect.ncdot.gov/projects/WZTC/Pages/Manuals-Guidelines.aspx.

All flagging, spotting, or operating Automated Flagger Assist Devices (AFAD) inside the highway right of way requires qualified and trained Work Zone Flaggers. Training for this certification is provided by NCDOT approved training resources and by private entities that have be pre-approved to train themselves.

All personnel involved with the installation of Work Zone Traffic Control devices inside the highway right of way are required to be qualified and trained Work Zone Installers. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

All personnel in charge of overseeing work zone Temporary Traffic Control operations and installations inside the highway right of way are required to be qualified and trained Work Zone Supervisors. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

For questions and/or additional information regarding this training program please refer to https://connect.ncdot.gov/projects/WZTC/Pages/Training.aspx or call the NCDOT Work Zone Traffic Control Section (919) 814-5000.

r ay item.	ray Unit.
Traffic Control	Lump Sum

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Day Ilmite

ASPHALT PLANT MIX, PAVEMENT REPAIR:

The Asphalt Repair Detail in the plans does not apply due to the Encroachment requirements from NCDOT. Use the Mill and Patch Method in **Figure 2** of this document.

654-1 Description

First paragraph: Add the following sentence to the end of the paragraph, "This item applies as detailed in the plans and **Figure 2** of this document only on the State or Municipally Maintained roadways."

654-4 Measurement and Payment

Delete the second paragraph and add: "No direct payment will be made for ABC or Asphalt Binder for Plant Mix as both items are incidental to this pay item.

Pay Item Pay Unit

Asphalt Plant Mix, Pavement Repair

Ton

FLOWABLE FILL, PAVEMENT REPAIR:

Flowable fill, meeting the requirements of 1000-7 of the NCDOT 2024 Standard Specifications for Roads and Bridges, will be used to backfill the utility cut excavations in conjunction with the item Asphalt Plant Mix, Pavement Repair and as shown in **Figure 2** of this document. This item will be measured and paid by the cubic yard of flowable fill that is incorporated into the backfill.

Pay Item Pay Unit

Flowable Fill, Pavement Repair

Cubic Yard

POSITIVE PROTECTION:

Considering guidance from the AASHTO Roadside Design Guide and site conditions: speed, ADT, and shoulder slope, the Contractor must maintain a 20 feet clear zone distance from the edge of travel lane. If the bore pits encroach into this clear zone Positive Protection must be provided in accordance with Section 1170 of the NCDOT 2024 Standard Specifications for Roads and Bridges and this Project Special Provision.

If the Contractor determines that Positive Protection is required to shield a hazard within the clear zone, then the Positive Protection shall be designed and sealed by a licensed North Carolina Professional Engineer. Plans and design calculations shall be submitted to the NCDOT District Engineer for review and approval prior to installation.

1170-4 Measurement and Payment

Delete the paragraphs and Pay Items in this sub-article and add the following:

Payment for Positive Protection is Lump Sum and includes providing plans and calculations from a licensed North Carolina Professional Engineer, revising the plans as necessary for approval of the NCDOT District Engineer, installation of the measures per plan and as specified and maintenance and removal of the same.

If the Contractor and project personnel determine that a clear zone of 20 feet can be maintained and Positive Protection is not necessary, this item will be deleted.

12" DUCTILE IRON WATER LINE AND DUCTILE IRON WATER PIPE FITTINGS:

Install 12" Ductile Iron Water Line at locations and as detailed in the plans and in accordance with Section 1510 of the NCDOT 2024 Standard Specifications for Roads and Bridges, and the Utility Construction Project Special Provisions in this contract proposal.

Pay Item Pay Unit

12" Ductile Iron Water Line Linear Foot

Ductile Iron Water Pipe Fittings Pound

WET TAP AND VALVE:

Install Wet Tap and Valve at locations and as detailed in the plans and in accordance with Section 1515 of the NCDOT 2024 Standard Specifications for Roads and Bridges, NCDOT 2024 Roadway Standard Drawings and the Utility Construction Project Special Provisions in this contract proposal.

Pay Item Pay Unit

Wet Tap and Valve Each

FIRE HYDRANT ASSEMBLY:

Install fire hydrant assemblies at locations and as detailed in the plans and in accordance with Sections 1510 and 1515 of the NCDOT 2024 Standard Specifications for Roads and Bridges, NCDOT 2024 Roadway Standard Drawings and the Utility Construction Project Special Provisions in this contract proposal.

Pay Item Pay Unit

Fire Hydrant Assembly Each

RELOCATE WATER SERVICE:

Relocate Water Service at locations and as detailed in the plans and in accordance with Section 1515 of the NCDOT 2024 Standard Specifications for Roads and Bridges, and the Utility Construction Project Special Provisions in this contract proposal.

1515-4 Measurement and Payment

Add the sentence to the second paragraph after the second sentence, "Payment includes the linear feet of water service line required for the relocation."

Delete paragraphs 5 and 6 and the Pay Item Water Service Line

Pay Item Pay Unit

Relocate Water Service Each

8" DUCTILE IRON SEWER LINE:

Install 8" Ductile Iron Sewer Line at locations and as detailed in the plans and in accordance with Section 1520 of the NCDOT 2024 Standard Specifications for Roads and Bridges, and the Utility Construction Project Special Provisions in this contract proposal.

Pay Item Pay Unit

8" Ductile Iron Sewer Line Linear Foot

UTILITY MANHOLES:

Install Utility Manholes at locations and as detailed in the plans and in accordance with Section 1525 of the NCDOT 2024 Standard Specifications for Roads and Bridges, NCDOT 2024 Roadway Standard Drawings and the Utility Construction Project Special Provisions in this contract proposal.

1525-4 Measurement and Payment

Delete the second paragraph and pay items

Pay Item Pay Unit

Utility Manhole Each

16" ENCASEMENT PIPE

Install encasement pipe at locations and as detailed in the plans and in accordance with Section 1540 of the NCDOT 2024 Standard Specifications for Roads and Bridges, and the Utility Construction Project Special Provisions in this contract proposal.

1540-4 Measurement and Payment

Change the last sentence of the first paragraph to, Material used to fill the annular void and the rubber end seals and steel spiders are incidental to the work being performed.

Pay Item Pay Unit

16" Encasement Pipe Linear Foot

BORE AND JACK OF 16"

Perform bore and jack at locations and as detailed in the plans and in accordance with Section 1550 of the NCDOT 2024 Standard Specifications for Roads and Bridges, and the Utility Construction Project Special Provisions in this contract proposal.

Sub article 1550-3 (B) Design

Delete the last sentence of the first paragraph and add, no geotechnical investigation has been performed at the site of the bore and jack for this project.

Pay Item Pay Unit

Bore and Jack of 16" Linear Foot

TEMPORARY SHORING

Under Subarticle 1550-3(B) Design of the 2024 NCDOT Standard Specifications, an engineer licensed by the State of North Carolina will evaluate field conditions in accordance with Subarticle 1505-3(A) Shielding and Shoring, for the maintenance of traffic and certify that temporary shoring is not needed or provide a plan in accordance with the Subarticle for the maintenance of traffic. The evaluation, plan and design is incidental to the item Bore and Jack 16".

If the contractor's licensed engineer certifies that Temporary Shoring for the maintenance of traffic is not needed, this item will be eliminated. Otherwise, the contractor will install and maintain temporary shoring as required and will be paid under the line item, Temporary Shoring.

Pay Item Pay Unit

Temporary Shoring Lump Sum

PROJECT SPECIAL PROVISIONS Utility Construction



The proposed utility construction shall meet the NCDOT 2024 "Standard Specifications for Roads and Structures" with amendments as noted below.

In these Project Special Provisions, where manufacturers are listed for certain products, the cited examples are used only to denote the quality standard of the products desired, and they do not restrict bidders to a specific brand, make, manufacturer or specific name; they are only used to set forth and convey to bidders the general style, type, character and quality of products desired; and equivalent products will be acceptable, subject to review and approval by Winston-Sa4lem/Forsyth County Utilities.

Revise the 2024 Standard Specifications as follows:

Page 3-2, Article 300-4 Preparation of Pipe Foundation:

Delete the last 2 sentences of the second paragraph.

Page 3-3, Article 300-7 Backfilling:

add the following to line 39:

Flowable fill, if approved, must not come in contact with the pipe.

Page 10-65, Sub-article 1034-3, Concrete Pipe

Delete in its entirety. City does not allow concrete pipe in its gravity sewer system

Page 10-65, Sub-article 1034-4, Ductile Iron Pipe, third paragraph Add the following sentences:

Rubber gasket joints shall conform to ANSI A21.11 (AWWA C111). Pipe laying condition will be Type 2, flat=bottom trench with backfill lightly consolidated to centerline of pipe. Pipe for sanitary shall ne a minimum thickness Class 50.

The interior of pipe for sanitary sewer will be lined with 40 mils of ceramic epoxy. All bells and spigots for sanitary sewer pipe must be lined with a minimum of 8 mils of joint compound. The exterior of all pipe shall be coated with a bituminous coating.

For fittings, all glands shall be ductile iron, not gray iron. Fittings shall have a minimum pressure rating of 250 psi. Rubber gasket joints shall conform to ANSI A21.11 (AWWA C111). "DI" or "Ductile" shall be cast on each fitting.

The interior of fittings for sanitary sewer will be lined with 40 mils of ceramic epoxy. All bells and spigots for sanitary sewer fittings must be lined with a minimum of 8 mils of joint compound. The exterior of all fittings shall be coated with a bituminous coating. Fittings coated on the interior and exterior with 8 mils of fusion bonded epoxy in accordance with ANSI/AWWA C116 and ANSI/AWWA C550 are acceptable.

Restrained joint pipe and fittings with a gripping gasket as the only means of restraint will not be allowed.

Page 10-66, Sub-article 1036-2, Copper Pipe second paragraph

Delete: "Use flared or"

Page 10-67, Sub-article 1036-5 Ductile Iron Pipe And Fittings:

Add the following paragraphs:

Ductile Iron Pipe:

- (1) Ductile iron pipe shall be designed to conform to ANSI A21.50 (AWWA C150) and shall be manufactured to conform to ANSI A21.51 (AWWA C151). The interior of pipe for water will be cement lined in accordance with ANSI A21.4 (AWWA C104). The exterior of all pipe shall be coated with a bituminous coating.
- (2) Pipe for water shall be pressure Class 350 for 3" 16" and pressure Class 250 for 18" and above. Any deviations in class shall be otherwise specified or otherwise shown on the Engineer's drawings. If for any reason the Engineer finds any or all ductile iron pipe unacceptable, the Contractor shall be responsible for obtaining acceptable pipe. The Engineer's acceptance or rejection of all pipe will be final.

Ductile Iron Flexible Restrained Joint Pipe and Fittings:

(1) All restrained joint pipe and fittings shall have flexible push-on joints unless otherwise approved by the Engineer. At locations where field cutting of restrained joint pipe is required for fittings, the TR Flex Gripper Ring may be used. Field welding will not be allowed. Restrained joint pipe and fittings with a gripping gasket as the only means of restraint will not be allowed. Pipe and fittings shall be Flex-Ring by American, TR Flex by U.S. Pipe, or TR Flex by McWane (* or approved equal). If for any reason the Engineer finds any or all ductile iron flexible restrained joint pipe unacceptable, the Contractor shall be responsible for obtaining acceptable pipe. The Engineer's acceptance or rejection of all pipe will be final.

Page 10-67, Article 1036-4, Steel Pipe

Delete Subarticle (A) Water Pipe in its entirety. City does not allow new steel pipe in its water system.

(B) Encasement Pipe

Add the following paragraph after the first paragraph:

Steel encasement pipe shall be smooth wall pipe with welded joints. The encasement pipe must be capable of withstanding highway loadings and must have an inside diameter which will allow the carrier pipe to be removed subsequently without disturbing the encasement pipe. Minimum wall thicknesses for steel encasement pipe are as follows: ENCASEMENT PIPE SIZE (Outside Diameter) WALL THICKNESS (NCDOT) 16" 0.250", 18" 0.250", 20" 0.250", 24" 0.250", 30" 0.312", 36" 0.375", 48" 0.500". Pipe diameter shall be as shown on the Engineer's drawings (**Figure 1**).

Page 10-67, Sub-article 1036-6 Fire Hydrants:

Add the following paragraphs:

(1) All hydrants will have a dry top with O-ring seals which permanently seal off the stem operating threads from water and keep the lubricant in. All hydrants shall be opened by turning the operating nut on top of the hydrant counterclockwise. The operating nut and cap nuts shall be pentagon-shaped, 1 ½" measured point to flat. The main valve shall be a compression type valve with a valve opening of 5 ½". Each hydrant will have two hose nozzles and one steamer nozzle. The 2 ½" hose nozzles shall have national standard threads. The steamer nozzle shall have a 5" integral Storz connection. The nozzle shall be fastened into the hydrant barrel by mechanical means, but shall not be leaded into the barrel. Nozzle caps shall be chained to the barrel. All hydrants will be furnished with a breakable traffic feature that will break upon impact. The feature shall consist of a breakable safety flange on the barrel and a breakable safety coupling in the main valve stem. Hydrants must have a bronze main valve seat ring that threads into a bronze drain ring. Each hydrant shall have at least two bronze drain outlets. All hydrants will have 6" mechanical joint base connections or the Alpha connection by American Flow Control or approved equal unless otherwise specified by the Engineer. Hydrants shall be designed for a minimum working pressure of 250 psi. Assembled hydrants shall be subjected to hydrostatic tests of twice the rated working pressure in accordance with ANSI/AWWA C502. All exterior iron surfaces below ground level shall be covered with two coats of asphaltic varnish or fusion bonded epoxy. All exterior iron surfaces above ground level shall be painted yellow to the satisfaction of the Engineer. Yellow paint shall be Rust-Oleum 7446, Rust-Oleum V2148, Kimball Midwest 80-942, or manufacturer's standard equivalent. All interior iron surfaces of the hydrant shoe which are in contact with water (including the lower valve plate and nut) shall be coated with a minimum of 8 mils of fusion bonded epoxy or liquid epoxy in accordance with ANSI/AWWA C550. All hydrants shall have a thrust or anti-friction washer in the operating area of the hydrant bonnet. A weather cap around the operating nut on top of the hydrant is required. Hydrants accepted by the City of Winston- Salem are as follows:

Owner Preference:

Super Centurion 250, manufactured by Mueller Company

UC-4

B-84-B-5, manufactured by American Flow Control K-81D Guardian, manufactured by Kennedy Valve Company Medallion, manufactured by Clow Valve Company *or approved equal

Page 10-67, Sub-article 1036-7 (B) Bronze Gate Valves:

Replace with the following:

The use of bronze gate valves shall not be permitted.

Page 10-68, Sub-article 1036-9, Service Line Valves and Fittings Add the following:

All corporation cocks shall be made of brass. All brass fittings shall be manufactured in accordance with AWWA C800 and ASTM B-584. All brass components in contact with potable

water must be made from CDA/UNS Brass Alloy C89833 with a maximum lead content of .25% by weight. Brass alloys not listed in ANSI/AWWA C800 Paragraph 4.1.2 are not approved. All fittings shall be UL classified to NSF/ANSI 61 and NSF/ANSI 372 standards and stamped or embossed with a mark or name indicating that the product is manufactured from the low-lead alloy as specified. All corporation cocks shall be of the ball valve type with AWWA inlet threads.

Page 10-123, Article 1074-8 Steps:

replace with the following:

All manhole steps shall conform to current OSHA standards and ASTM C478. The approved step shall conform to the City of Winston-Salem detail drawing for "Polypropylene Manhole Step". All other steps must be approved by the Engineer prior to being installed.

Page 15-1, Article 1500-2 Cooperation with the Utility Owner, paragraph 2: add the following sentences:

The utility owner is Winston-Salem/Forsyth County Utilities. The primary contact person for the owner is Todd Lewis, PE; He can be reached by phone, office phone: 336-747-6842. The contractor shall provide access for the owner's representatives to all phases of construction. The owner shall also be notified two (2) weeks prior to commencement of any work and one (1) week prior to service interruption.

Page 15-2, Sub-article 1500-7, Submittals and Records

Add the following after the third paragraph:

As a final measure required for acceptance, the Contractor shall clean and televise all sanitary

sewer mains prior to requesting final inspection. The Contractor shall televise the entire sewer

main and all service connections using standardized NASSCO (PACP, MACP, & LACP) practices, unless otherwise specified.

Two copies of the entire video inspection along with a properly formatted PACP standard exchange database shall be submitted to the Engineer on a data disc (DVD or flash drive).

Page 15-2, Sub-article 1500-9 Placing Pipelines into Service

Add the following sentences:

Obtain approval from City prior to placing a new water line into service. Use backflow prevention assemblies for temporary connections to isolate new water lines from existing water line. A representative from City will witness all tests performed on their water facilities. Obtain approval from City prior to placing a new sewer line into service. A representative from City will witness all tests performed on their sewer facilities.

Page 15-3, Article 1505-2 Materials:

replace line 12 with the following:

Use Class VI select material for foundation conditioning and bedding.

Page 15-3, Article 1505-3 Construction Methods:

Remove reference to Article 300-6.

Page 15-4, Sub-article 1505-3 (E), Thrust Restraint:

replace the fourth paragraph with the following:

Concrete thrust blocks shall be constructed as directed by the Engineer at all bends, tees, tapping sleeves, tapping saddles, reducers, plugs, etc. to provide restraint against thrust resulting from internal pressure. Any exceptions to this such as restrained joints or mechanical joints with retainer glands will be noted on the Engineer's drawings or otherwise specified. Thrust blocks will not be required for restrained joint pipe (exception - blocking will be required when connecting restrained pipe to existing pipe).

All thrust blocks will be constructed of a minimum of Class A concrete. Thrust blocks for bends, fire hydrants, tees and stub-outs shall be constructed in accordance with the City of Winston-Salem thrust block detail drawings.

Polyethylene shall be placed over all fittings before the concrete is poured. All nuts and bolts shall be clear of concrete so that the joint will be accessible. Plywood shall be used as forms for blocking. Concrete is to be poured only against stable undisturbed soil and

should be allowed to set prior to any backfilling. Thrust blocks should be allowed to cure two days prior to pressure testing the water main. Higher strength concrete may be required when it is necessary to pressure test prior to the end of the two day curing time.

Page 15-6, Sub-article 1510-3 (B), Testing and Sterilization: replace with the following:

(a) Flushing:

Prior to pressure testing and disinfection, the Contractor shall flush all water mains with a polyurethane foam pipe pig (minimum 5 pounds per cubic foot density) by Knapp Poly Pig, Inc. or approved equal. The pipe pig shall be propelled hydraulically through the mains at a rate sufficient to remove all foreign matter. Valves shall be operated in a manner which will direct the pipe pig toward the end of the main or a selected discharge point. The pig shall be removed through an open end of the main, a fitting, or through a fire hydrant which has the main valve seat ring removed. Flushing shall continue until the Engineer determines that the mains are free from all foreign matter. The Engineer must be present during the entire flushing process. Any work done without the Engineer's supervision will not be accepted.

No direct payment will be made for flushing, as such work will be incidental to the installation of the pipe.

(b) Pressure Testing:

After flushing of the water main is completed, all ductile iron water mains shall be tested in accordance with AWWA C600 - Section 4 and two (2) inch PVC water mains shall be tested in accordance with AWWA C605 – Section 7. The test shall be performed with all hydrant valves (4 ½" or 5 1/4") closed, but all hydrant leg valves (6") open. All corporation cocks shall be open and angle valves inside meter boxes will be closed. The number of sections to be tested at one time shall be determined by the Engineer. Testing shall not be performed within 24 hours after the new main is filled or within two days after the thrust blocks have been poured. Test pressure at the high point in the new main shall be 200 psi, and this pressure shall be maintained for no less than two hours. Test pressures above 200 psi must be approved by the Engineer. If after the two hour period the pressure has dropped more than five psi, a quantity of water must be used to bring the pressure back up to test pressure. This quantity of water must be metered and shall not exceed the following allowable leakage figures:

* Allowable Leakage in Gallons Per 1000 Feet Of Main

MAIN SIZE	2"	4"	6"	8"	12"	16"	20"	24"	30"	36"	
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GALL	ONS	0.38	0.76	1.15	1.53	2.29	3.06	3.82	4.59	5.73	6.88	
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^{*} This table is figured for 200 psi. Engineer will provide allowable leakages for higher test pressures.

If the allowable leakage is exceeded or if pressure drops more than 15 psi, the test fails. All leaks shall be repaired regardless of whether or not the allowable leakage is exceeded. The Engineer must be present during the entire pressure testing process. Any work done without their supervision will not be accepted.

No direct payment will be made for pressure testing, as such work will be incidental to the installation of pipe.

(c) Disinfection:

All water mains shall be disinfected by the Contractor in accordance with AWWA C651. The Contractor shall furnish qualified personnel to do the work who are experienced with chlorine and disinfecting agents. Disinfection shall be accomplished by the continuous feed method using liquid chlorine or a hypochlorite solution. If liquid chlorine (100 percent available chlorine) is used, a chlorine-gas water mixture shall be injected into the new main through a solution feed chlorinator and a booster pump. If hypochlorite is used, the hypochlorite solution shall be applied to the new main with a gasoline or electrically powered chemical feed pump designed for feeding chlorine solutions. In addition, a rate setter or meter may be required in order that the flow in gallons per minutes may be determined. Hypochlorite shall either be calcium hypochlorite (65 percent available chlorine in granular or tabular form) or sodium hypochlorite (5 - 15 percent available chlorine in liquid form).

Water from the existing distribution system or other approved source and the chlorine solution must both be made to flow at rates which will guarantee a chlorine concentration of 50-100 parts per million throughout the new main. This high concentration chlorine solution shall not be pumped into copper service connections (this could cause the copper to corrode). Concentrations above 100 parts per million must be approved by the Engineer. The main line valve separating the existing and new water mains shall remain closed during the disinfection process. A bypass line and backflow preventer will be used in order to prevent backflow into the existing system. The backflow preventer must be approved by the City of Winston-Salem Utilities Division. Pumping of the chlorine solution shall be continued until tests conducted at the extremities of the new main indicate a concentration of the required 50-100 parts per million. The chlorinated water shall then be retained in the new main for 24 hours, during which time all valves and hydrants in the new main shall be operated in order to disinfect all parts of the system. After the 24 hour period there should be at least 10 parts per million concentration of chlorine throughout the main. The chlorinated water shall then be flushed from the main until the chlorine concentration in the water leaving the main is no higher than the concentration in the existing distribution system.

chlorinated water must be flushed into the sanitary sewer system or dechlorinated to 0 parts per million of chlorine prior to discharge. The Utilities Division must be notified prior to flushing. Dechlorination shall be accomplished in accordance with AWWA C655 using equipment by Pollard or approved equal. While the main is being flushed, all service connections shall be thoroughly flushed in order to disinfect each connection.

After final flushing and before the main is placed in service, a sample or samples shall be collected by City personnel from the line and tested for bacteriological quality. The number of samples to be taken and the location of the samples shall be determined by the Engineer. The minimum number of samples shall be one for every 4,000 feet of pipe. No hose or fire hydrant shall be used in collection of samples. If the initial disinfection fails to produce satisfactory samples, disinfection shall be repeated by the Contractor until satisfactory samples have been obtained. The City, upon 24 hours advance notice, will furnish the personnel and laboratory facilities to conduct the required bacteriological tests. No samples will be taken on Friday, the day before a holiday or on a holiday.

The Engineer must be present during the entire disinfection process. Any work done without the Engineer's supervision will not be accepted.

Pounds of calcium hypochlorite used for disinfection shall be as follows:

Pounds of Calcium Hypochlorite Required To Disinfect Water Mains With 100 Parts Per Million of Chlorine

100190010100000000000000000000000000000					
Main Size	Pounds Per 1000 Feet Of Pipe				
2"	0.2				
4"	0.8				
6"	1.8				
8"	3.1				
12"	7.0				
16"	12.4				
20"	19.4				
24"	28.0				
30"	43.9				
36"	63.0				

No direct payment will be made for disinfection, as such work will be incidental to the installation of pipe.

Page 15-8; Article 1515-3 Construction Methods, Sub-article 1515-3 (B), Meters: add the following:

For relocated water meters the Contractor shall install a new meter box, angle valves, yoke, tee and ball valve as directed by the Engineer. The Contractor shall expose a portion of the water line from the dwelling or business to determine the material and have proper fittings for reconnection to the new meter box. At the approval of the Engineer, the Contractor shall remove the existing meter and install it in the new yoke. The Contractor shall reconnect the property side water line from the existing meter box to the new meter box. This reconnection shall be directed by the Engineer and performed in a timely manner so that the property is without water for a minimal amount of time. The Contractor shall remove and dispose of the existing meter box and yoke and backfill as shown on the plans or as directed by the Engineer.

Page 15-10, Sub-article 1520-2 Materials:

add the following sentences:

- (1) Ductile iron pipe for sanitary sewer will be lined with 40 mils of ceramic Epoxy. All bells and spigots for sanitary sewer pipe must be lined with a minimum of 8 mils of joint compound. The exterior of all pipe shall be coated with a bituminous coating.
- (2) Pipe joints will be single rubber gasket push-on type or mechanical joint type unless otherwise specified or otherwise shown on the Engineer's drawings. Rubber gasket joints shall conform to ANSI A21.11 (AWWA C111). Pipe design laying condition will be Type 2, flat-bottom trench with backfill lightly consolidated to centerline of pipe.
- (3) Pipe for sanitary sewer shall be minimum thickness Class 50. Any deviations in class shall be otherwise specified or otherwise shown on the Engineer's drawings. If for any reason the Engineer finds any or all ductile iron pipe unacceptable, the Contractor shall be responsible for obtaining acceptable pipe. The Engineer's acceptance or rejection of all pipe will be final.

Page 15-11, Sub-article 1520-3, Construction Method

Delete third paragraph in its entirety. No PVC pipe is allowed on this project.

Page 15-11, Sub-article 1520-3, Construction Methods

Add the following to the third sentence of the fifth paragraph: "or within fenced areas"

Page 15-11, Sub-article 1520-3, Construction Methods

Delete the seventh paragraph in its entirety.

Replace with the following:

The standard fall through manhole is 1"(0.08") including 6" connections into a manhole.

Page 15-11, Sub-Article 1520-3 (A), (2) Testing:

replace with the following:

A low-pressure air test shall be performed by the Contractor after the pipeline is completely backfilled and before being placed into service. The Engineer must be present during the entire testing process. Any work done without their supervision will not be accepted.

(a) Low Pressure Air Testing Requirements:

The Contractor shall use an approved pressure gauge and perform the test in accordance with ASTM C-828. Each section of pipeline (including connections) between manholes will be tested by plugging the upstream manhole and the downstream manhole. By using mirrors, lights, etc., the Contractor must show the Engineer that the 2 plugs are at the proper location and that the line is clear between the plugs. Air is added to the line until the pressure is between 3.0 psi and 4.0 psi. If the pressure drops more than 1.0 psi during the time shown on the chart below, the line is presumed to have failed the test. An obvious leak in any section will be corrected even if the section passes testing. The Contractor will be responsible for the complete removal of all plugs.

Air test time shall be as follows:

Main Size	Time (minutes per 100 feet of pipe)
8"	1.5
10"	1.8
12"	2.1
15"	2.4
18"	2.7
21"	3.3
24"	3.9
27"	4.5
30"	5.1
36"	6.3
42"	7.6

Minimum Air Test Time

No direct payment will be made for acceptance testing, as such work will be incidental to the installation of the pipe and/or service connections.

(b) Video Inspection:

As a final measure required for acceptance, the Contractor shall clean and televise all sanitary sewer mains prior to requesting final inspection. The Contractor shall televise the entire sewer main and all service connections using standardized

NASSCO (PACP, MACP, & LACP) practices, unless otherwise specified below. The process shall begin at the upstream manhole for each segment, and proceed to the downstream manhole for that same segment. Connections shall be televised from the cleanout to the main. Video inspection may occur only after Record Drawings are accepted and approved by the City of Winston-Salem. Prior to beginning the process, a 24 hour notice must be given by the Contractor to the Engineer. Prior to video inspection in paved areas, structures must be raised to final grade and 2" of asphalt must be in place. The City will not accept video that is more than 180 days old unless approved by the Engineer.

The cameras used for inspection shall be ones specifically designed and constructed for sanitary sewer pipeline inspection. Lighting for the cameras shall be suitable to provide a clear color picture of the entire periphery of the pipe. The cameras used for mains must be able to pan, tilt and zoom in order to allow for 360 degree viewing. The television system shall be equipped to indicate the camera travel distance in feet by display on the video viewing screen. All television equipment (camera, monitor, etc.) must be capable of producing picture quality which is satisfactory to the Engineer.

Within 2 hours of the video inspection, the Contractor shall clean the sewer mains and service connections with a high velocity water jet. All debris shall be collected in the downstream manhole and removed by the Contractor. Debris shall not be released into the existing sewer system. During the entire video process, the distance counter must be set at zero at each upstream manhole for each segment (set the counter at zero at the ground for each service connection). The Contractor will be required to pan and tilt at each manhole and at each service connection. The interior of each manhole must be marked with the manhole station (or manhole number) with paint or some other legible identifier (6" - 12" high letters or numbers). Each cleanout stack must be marked with the house number or the lot number. For mains, the Contractor will also be required to pan, tilt and zoom at all couplings, at all dates for Protecto 401 lined ductile iron pipe, and when any potential problems or abnormalities are noticed or suspected. Travel speed for the camera will be 15 - 30 feet per minute. The following video screen data will be required:

- Project name and project number
- Date of inspection
- Travel distance and time
- Station of start and end manholes
- Depth of start and end manholes
- Size of main
- Type of pipe

All above data shall be shown at the start and end manholes of each segment. While the camera is moving through the main and service connections, distance shall be the only data shown on the screen (top left or top right of screen).

For mains, a stream of water approximately 1" in width must be flowing during the entire video process. For service connections, a minimum of 5 gallons of water must be introduced into each cleanout stack just prior to the video process. In all cases, the flow must be shown on the bottom of the video screen.

Two copies of the entire video inspection along with a properly formatted PACP standard exchange database shall be submitted to the Engineer on a data disc (DVD or flash drive). A "properly formatted PACP standard exchange database" includes properly PACP coded defects (NASSCO version 6.x), proper media paths to associated video files, and all asset IDs used in the inspection must match what the submitted record drawings indicate for each asset. The video file shall be formatted to MPEG-4 (MP4) with software compatible and readable by the City of Winston-Salem. The City of Winston-Salem shall not be responsible for purchasing additional software necessary to view the video file. Each inspection (manhole to manhole or cleanout to main) shall be separated into its own chapter or file. In the event of a main inspection, the chapter or file shall be named to indicate the upstream manhole station or number and then the downstream manhole station or number (e.g. MH1-MH2). In the event of a service connection inspection, the chapter or file shall be named to indicate the house number or lot number associated with the inspection. All file naming should match the identification numbers (manhole station or number, house number, or lot number) shown on the Record Drawings. The submitted video must have the ability to be viewed using fast forward and rewind.

Any video that does not clearly show the pipe and service connections will be rejected. In the event that repairs are made, the segment receiving the repairs shall be flushed and televised again. The Engineer must oversee the entire cleaning and televising process. Final approval of the video inspection will only be after the Engineer has reviewed the video in the office (videos will not be field approved).

No direct payment will be made for cleaning and video inspection, as such work will be incidental to the installation of the pipe and/or service connections.

Page 15-14, Sub-article 1525-2, Materials

First paragraph, add the following after the second sentence:

All manhole joints shall be sealed on the outside of the manhole with butyl adhesive tape (minimum 6" wide). When unstable subgrade is encountered, manholes shall be bedded on stabilization stone.

Page 15-14, Sub-article 1525-2, Materials

First paragraph, delete third sentence in its entirety.

Replace with the following:

Flexible manhole connectors shall conform to ASTM C923.

Page 15-14, Article 1525-2, Materials, line 10:

add the following:

Connectors shall be manufactured by Press-Seal Gasket Corporation, Hamilton Kent, NPC Inc.

or approved equal.

Page 15-14; Section 1525 Utility Manholes; Sub-article 1525-2 Materials Add the following paragraphs:

Manhole Rings and Covers (Type 1):

(1) Type 1 manhole rings and covers will be made of cast iron and will conform to ASTMA48, Class 35B. In addition, all manhole rings and covers shall be designed to support an H-20 wheel load. All castings will conform to the shape and dimensions shown on the City of Winston-Salem detail drawing for "Manhole Ring and Cover (Type 1)" and will be free from holes, cracks or any other defects. Rings and covers will have machined seats so that the cover will not rattle. Rings will weigh a minimum of 190 pounds and covers a minimum of 120 pounds. The name of the manufacturer and the part number shall be cast permanently on the ring and the cover. Castings that do not meet specifications shall be rejected. Rings and covers furnished under these specifications shall be manufactured by one of the following:

Owner Preference:

East Jordan Iron Works, Inc. (Product No. 41384110 & 41384072)

U.S. Foundry & Manufacturing Corp. (Ring - Part No. 669; Cover - Part No. KL)

* or approved equal

Manhole Rings and Covers (Type 2):

(1) Type 2 manhole rings and covers shall meet all specifications for Type 1 rings and covers

and shall conform to the City of Winston-Salem detail drawing for "Manhole Ring and Cover (Type 2)". Rings and covers furnished

Owner Preference:

East Jordan Iron Works, Inc. (Product No. 41385072)

U.S. Foundry & Manufacturing Corp. (Ring - Part No. 669-2WS; Cover - Part No. KL-2WS)

* or approved equal

Manhole Rings and Covers (Type 3):

(1) Type 3 manhole rings and covers shall meet all specifications for Type 1 rings and

covers, except that rings will weigh a minimum of 136 pounds and covers a minimum of 120 pounds. All rings and covers shall conform to the City of Winston-Salem detail drawing for "Manhole Ring and Cover (Type 3)". Rings and covers furnished under these specifications shall be manufactured by one of the following:

Owner Preference:

East Jordan Iron Works, Inc. (Product No. 42384041W01)

U.S. Foundry & Manufacturing Corp. (Ring - Part No. 571WS; Cover - Part No. KKWS * or approved equal

MANHOLE STEPS:

(1) All manhole steps shall conform to current OSHA standards and ASTM C478. The approved step shall conform to the City of Winston-Salem detail drawing for "Polypropylene Manhole Step". All other steps must be approved by the Engineer prior to being installed

Page 15-14, Sub-article 1525-3, Construction Methods

Second paragraph, first sentence, delete the following: "resilient"

Replace with the following:

"flexible"

Delete the second and third sentences in their entirety.

Page 15-14, Sub-article 1525-3, Construction Methods

Fifth paragraph, fourth sentence, delete the following:

"recommended but not required"

Replace with the following:

"required"

Page 15-16, Sub-Article 1525-3 (D), Testing:

replace with the following:

Each manhole constructed by the Contractor shall be vacuum tested by the Contractor after assembly of the manhole. Prior to testing, and as directed by the Engineer, the Contractor shall clean out each manhole without foreign material being discharged into the existing sanitary sewer system. The test shall be conducted in accordance with ASTM C-1244. The test shall be performed after all grade rings and rings and covers have been installed. After the testing equipment is in place, a vacuum of 10 inches of mercury shall be drawn on the manhole. The time for the vacuum to drop to 9 inches of mercury must be greater than the minimum time listed below:

Minimum Vacuum Test Time (Seconds)

		Diameter of Manhole	
Manhole Depth	4'	5'	6'
0 - 10'	60 sec.	75 sec.	90 sec.
10 - 5'	75 sec.	90 sec.	105 sec.
15 - 25'	90 sec.	105 sec.	120 sec.
25 - 30'	105 sec.	120 sec.	135 sec.

The Engineer shall be present during the entire testing process. Any subsequent repairs to manholes which fail the vacuum test must be made on the inside and outside of each manhole. The Contractor will be responsible for the complete removal of all plugs.

No direct payment will be made for vacuum testing of manholes, as such work will be incidental to the installation of the manhole.

Figure 1.

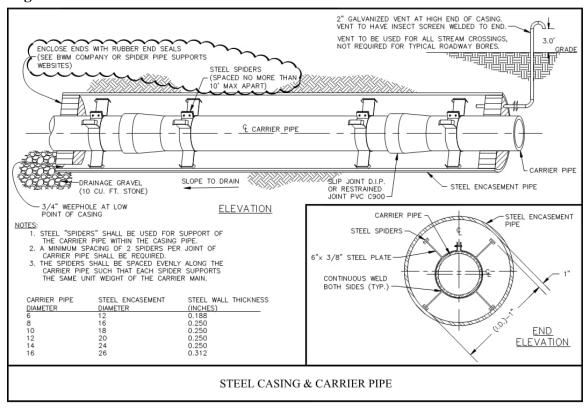
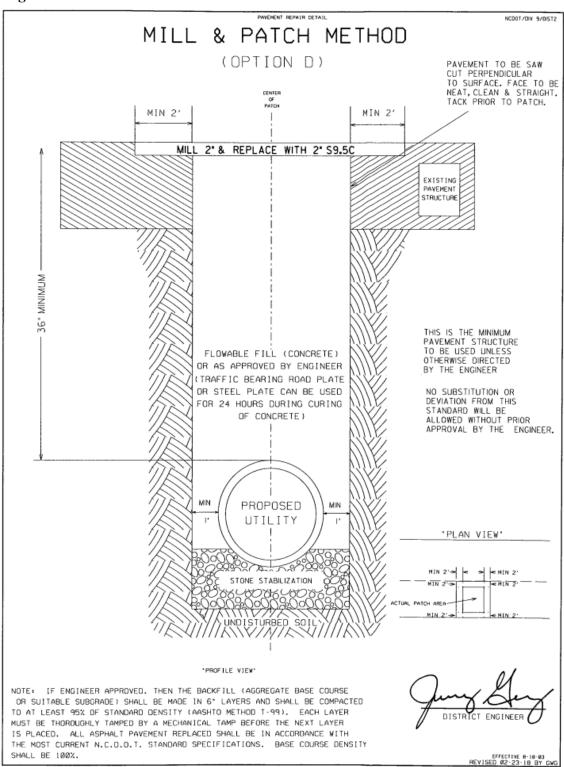


Figure 2.



STATE OF NORTH CAROLINA AFFIDAVIT

Town	of Kernersville – Shields Rd., Kernersville, NC 27284
****	**********
l,	(the individual attesting below), being duly authorized by and on
behalf	of, the Employer, after first being duly sworn hereby state
as follo	ows:
1.	Employer understands that $\underline{\text{E-Verify}}$ is the federal E-Verify program operated by the United
States	Department of Homeland Security and other federal agencies, or any successor or equivalent
progra	m used to verify the work authorization of newly hired employees pursuant to federal law in
accord	lance with NCGS §64-25(5).
2.	Employer understands that Employers (as defined in paragraph 3) must Use E-Verify. Each
emplo	yer, after hiring an employee to work in the United States, shall verify the work authorization of
the en	nployee through E-Verify in accordance with NCGS§64-26(a).
3.	Employer is a person, business entity, or other organization that transacts business in this State
and th	at employs 25 or more employees in this State. (mark Yes or No)
	a. YES, or
	b. NO
4.	Employer's subcontractors comply with E-Verify, and Employer will ensure compliance with E-
Verify	by any subcontractors subsequently hired by Employer.
This	day of, 2025.
 Signat	ure of Affiant
Print c	or Type Name:, Title:
State o	f North CarolinaCounty
	Sworn to and subscribed before me this day of, 20
	Notary Public My commission expires

FORM W-9

[Rev.1-92; Rev. 10-94 for Division Contract Use]

Pursuant to Internal Revenue Service Regulations, vendors must furnish their **Taxpayer Identification Number (TIN)** to the State. **If this number is not provided, you may be subject to a 31% withholding on each payment.** To avoid this 31% withholding and to insure that accurate tax information is reported to the Internal Revenue Service and the State, please use this form to provide the requested information **exactly as it appears on file with the IRS.**

Legal Business Name		
Address		
9 Digit Taxpayer Identification Number Social Security Number Federal Employer Identification	mber	
Business Designation (Check One) — — — — — —	Partnership Estate/Trust Corporation Public Servi	etorship (Soc.Sec. #) (Fed. ID) t (Fed. ID)
Under penalties of perjury, I declare that my knowledge and belief, it is true, correlated that I am subject to backup withhold	and complete. I have	e not been notified by the
Name (Print or Type name of individual-not con	ny)	Title (Print or Type)
Signature	Date	Telephone Number

MINORITY BUSINESS CONTRACT PROVISIONS (CONSTRUCTION)

SECTION A: INTENT

It is the intent of these guidelines that the <u>Town of Kernersville</u>, as awarding authority for this construction project, and the contractors and subcontractors performing the construction contract (s) awarded shall cooperate and in good faith do all things legal, proper and reasonable to achieve the statutory goal of ten percent (10%) for participation by minority businesses in each construction project as mandated by GS 143-128.2. Nothing in these guidelines shall be construed to require contractors or awarding authorities to award contracts or subcontracts to or to make purchases of materials or equipment from minority-business contractors or minority-business subcontractors who do not submit the lowest responsible, responsive bid or bids.

SECTION B: DEFINITIONS

- 1. Minority a person who is a citizen or lawful permanent resident of the United States and who is:
 - A. Black, that is, a person having origins in any of the black racial groups in Africa;
 - B. Hispanic, that is, a person of Spanish or Portuguese culture with origins in Mexico, South or Central America, or the Caribbean Islands, regardless of race;
 - C. Asian American, that is, a person having origins in any of the original peoples of the Far East, Southeast Asia and Asia, the Indian subcontinent, or the Pacific Islands;
 - D. American Indian; that is, a person having origins in any of the original Indian people of North America; or
 - E. Female.
- 2. Minority Business means a business:
 - A. In which at least fifty-one percent (51%) is owned by one or more minority persons, or in the case of a corporation, in which at least fifty-one percent (51%) of the stock is owned by one or more minority persons or socially or economically disadvantaged individuals; and
 - B. Of which the management and daily business operations are controlled by one or more of the minority persons or socially and economically disadvantaged individuals who own it.
- 3. Socially and economically disadvantaged individual means the same as defined in 15 U.S.C. 637. "Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities". "Economically disadvantaged individuals are those socially disadvantaged individuals whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business area who are not socially disadvantaged".
- 4. Public Entity means State and all public subdivisions and local government units.
- 5. Owner Town of Kernersville.

SECTION C: RESPONSIBILITIES

1. <u>Office for Historically Underutilized Businesses, Department of Administration</u> (hereinafter referred to as HUB Office).

The HUB Office has established a program, which allows interested persons or businesses qualifying as a minority business under G.S. 143-128.2, to obtain certification in the State of North Carolina procurement system. The information provided by the minority businesses will be used by the HUB Office to:

- A. Identify those areas of work for which there are minority businesses, as requested.
- B. Make available to interested parties a list of prospective minority business contractors and subcontractors.
- C. Assist in the determination of technical assistance needed by minority business contractors.

In addition to being responsible for the certification/verification of minority businesses that want to participate in the State construction program, the HUB Office will:

- (1) Maintain a current list of minority businesses. The list shall include the areas of work in which each minority business is interested.
- (2) Inform minority businesses on how to identify and obtain contracting and subcontracting opportunities through the State Construction Office and other public entities.
- (3) Inform minority businesses of the contracting and subcontracting process for public construction building projects.
- (4) Work with the North Carolina trade and professional organizations to improve the ability of minority businesses to compete in the State construction projects.
- (5) The HUB Office also oversees the minority business program by:
 - a. Monitoring compliance with the program requirements.
 - b. Assisting in the implementation of training and technical assistance programs.
 - c. Identifying and implementing outreach efforts to increase the utilization of minority businesses.
 - d. Reporting the results of minority business utilization to the Secretary of the Department of Administration, the Governor, and the General Assembly.

2. Owner – Town of Kernersville

- A. Develop and implement a minority business participation outreach plan to identify minority businesses that can perform public building projects and to implement outreach efforts to encourage minority business participation in these projects to include education, recruitment, and interaction between minority businesses and non-minority businesses.
- B. Furnish to the Historically Underutilized Business Office a minimum of twenty-one (21) days prior to the bid opening the following:
 - (1) Project description and location;
 - (2) Locations where bidding documents may be reviewed;
 - (3) Name of representative of the owner who can be contacted during the advertising period to advise who the prospective bidders are;
 - (4) Date, time and location of the bid opening.
 - (5) Date, time and location of prebid conference, if scheduled.

- C. Attend the scheduled prebid conference.
- D. At least 10 days prior to the scheduled day of bid opening, notify minority businesses that have requested notices from the public entity for public construction or repair work and minority businesses that otherwise indicated to the Office for Historically Underutilized Businesses an interest in the type or work being bid or the potential contracting opportunities listed in the proposal. The notification shall include the following:
 - (1) A description of the work for which the bid is being solicited.
 - (2) The date, time, and location where bids are to be submitted.
 - (3) The name of the individual within the owner's organization who will be available to answer questions about the project.
 - (4) Where bid documents may be reviewed.
 - (5) Any special requirements that may exist.
- E. Utilize other media, as appropriate, likely to inform potential minority businesses of the bid being sought.
- F. Maintain documentation of any contracts, correspondence, or conversation with minority business firms made in an attempt to meet the goals.
- G. Review, jointly with the designer, all requirements of G.S. 143-128.2(c) and G.S. 143-128.2(f)-(i.e. bidders' proposals for identification of the minority businesses that will be utilized with corresponding total dollar value of the bid and affidavit listing good faith efforts, or affidavit of self-performance of work, if the contractor will perform work under contract by its own workforce). The Town of Kernersville reserves the right to reject any or all bids and to waive informalities.
- H. Reviewing of minority business requirements at Preconstruction conference.
- I. Monitoring of contractors' compliance with minority business requirements in the contract documents during construction.
- J. Review prime contractors' pay applications for compliance with minority business utilization commitments prior to payment.
- K. Make documentation showing evidence of implementation of Owner's responsibilities available for review by State Construction Office and HUB Office, upon request.

3. <u>Designer</u> – Summit Design & Engineering Services

Under the single-prime bidding, separate prime bidding, construction manager at risk, or alternative contracting method, the designer will:

- A. Attend the scheduled prebid conference to explain minority business requirements to the prospective bidders.
- B. Assist the owner to identify and notify prospective minority business prime and subcontractors of potential contracting opportunities.
- C. Maintain documentation of any contacts, correspondence, or conversation with minority business firms made in an attempt to meet the goals.
- D. Review jointly with the owner, all requirements of G.S. 143-128.2(c) and G.S. 143-128.2(f)-(i.e. bidders' proposals for identification of the minority businesses that will be utilized with corresponding total dollar value of the bid and affidavit listing Good Faith Efforts, or affidavit of self-performance of work, if the contractor will perform work under contract by its own workforce) —prior to recommendation of award.
- E. During construction phase of the project, review "MBE Documentation for Contract Payment" (Appendix E) for compliance with minority business utilization commitments. Submit

Appendix E form with monthly pay applications to the owner and forward copies to the State Construction Office.

F. Make documentation showing evidence of implementation of Designer's responsibilities available for review by owner and HUB Office, upon request.

4. Prime Contractor (s), CM at Risk, and Its First-Tier Subcontractors

Under the single-prime bidding, the separate-prime biding, construction manager at risk and alternative contracting methods, contractor (s) will:

- A. Attend the scheduled prebid conference.
- B. Identify or determine those work areas of a subcontract where minority businesses may have an interest in performing subcontract work.
- C. At least ten (10) days prior to the scheduled day of bid opening, notify minority businesses of potential subcontracting opportunities listed in the proposal. The notification will include the following:
 - (1) A description of the work for which the subbid is being solicited.
 - (2) The date, time and location where subbids are to be submitted.
 - (3) The name of the individual within the company who will be available to answer questions about the project.
 - (4) Where bid documents may be reviewed.
 - (5) Any special requirements that may exist, such as insurance, licenses, bonds and financial arrangements.

If there are more than three (3) minority businesses in the general locality of the project who offer similar contracting or subcontracting services in the specific trade, the contractor(s) shall notify three (3), but may contact more, if the contractor(s) so desires.

- D. During the bidding process, comply with the contractor(s) requirements listed in the proposal for minority participation.
- E. Identify on the bid, the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit listing good faith efforts as required by G.S. 143-128.2(c) and G.S. 143-128.2(f).
- F. Make documentation showing evidence of implementation of PM, CM-at-Risk and First-Tier Subcontractor responsibilities available for review by State Construction Office and HUB Office, upon request.
- G. Upon being named the apparent low bidder, the Bidder shall provide one of the following: (1) an affidavit (Affidavit C) that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the applicable goal; (2) if the percentage is not equal to the applicable goal, then documentation of all good faith efforts taken to meet the goal. Failure to comply with these requirements is grounds for rejection of the bid and award to the next lowest responsible and responsive bidders.
- H. The contractor(s) shall identify the name(s) of minority business subcontractor(s) and corresponding dollar amount of work on the schedule of values. The schedule of values shall be provided as required in Article 14 of the General Conditions of the Contract to facilitate payments to the subcontractors.
- I. The contractor(s) shall submit with each monthly pay request(s) and final payment(s), "MBE Documentation for Contract Payment" (Appendix E), for designer's review.
- J. During the construction of a project, at any time, if it becomes necessary to replace a minority business subcontractor, immediately advise the owner. State Construction Office, and the

- Director of the HUB Office in writing, of the circumstances involved. The prime contractor shall make a good faith effort to replace a minority business subcontractor with another minority business subcontractor.
- K. If during the construction of a project additional subcontracting opportunities become available, make a good faith effort to solicit subbids from minority businesses.
- L. It is the intent of these requirements apply to all contractors performing as prime contractor and first tier subcontractor under construction manager at risk on state projects.

5. Minority Business Responsibilities

While minority businesses are not required to become certified in order to participate in the State construction projects, it is recommended that they become certified and should take advantage of the appropriate technical assistance that is made available. In addition, minority businesses who are contacted by owners or bidders must respond promptly whether or not they wish to submit a bid.

SECTION D: DISPUTE PROCEDURES

It is the policy of this state that disputes that involves a person's rights, duties or privileges, should be settled through informal procedures. To that end, minority business disputes arising under these guidelines should be resolved as governed under G.S. 143-128(g).

SECTION E: MINORITY BUSINESS SUBCONTRACT GOALS:

The goals for participation by minority firms as subcontractors on this project have been set at 10%.

The bidder must identify on its bid, the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit (Affidavit A) listing good faith efforts or affidavit (Affidavit B) of self-performance of work, if the bidder will perform work under contract by its own workforce, as required by G.S. 143-128.2(c) and G.S. 143-128.29(f).

The lowest responsible, responsive bidder must provide, within 72 hours after notification of being low bidder, Affidavit C, that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the applicable goal.

OR

Provide Affidavit D, which includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, with documentation of Good Faith Effort, if the percentage is not equal to the applicable goal.

The above information must be provided as required. Failure to submit these documents is ground for rejection of the bid.

SECTION F: MINIMUM COMPLIANCE REQUIREMENTS

All written statements, affidavits or intentions made by the Bidder shall become a part of the agreement between the Contractor and the Town of Kernersville for performance of this contract. Failure to comply with any of these statements, affidavits or intentions, or with the minority business guidelines shall constitute a breach of the contract. A finding by the Town of Kernersville that any information submitted either prior to award of the contract or during the performance of the contract is inaccurate, false or incomplete, shall also constitute a breach of the contract. Any such breach may result in termination of the contract in accordance with the termination provisions contained in the contract. It shall be solely at the option of the Town of Kernersville whether to terminate the contract for breach.

In determining whether a contractor has made Good Faith Efforts, the Town of Kernersville will evaluate all efforts made by the Contractor and will determine compliance in regard to quantity, intensity, and results of these efforts. Good Faith Efforts include:

- 1. Contacting minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor or available on State or local government maintained lists at least 10 days before the bid or proposal date and notifying them of the nature and scope of the work to be performed.
- 2. Making the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bid or proposals are due.
- 3. Breaking down or combining elements of work into economically feasible units to facilitate minority participation.
- 4. Working with minority trade, community, or contractor organizations identified by the Office for HUB and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5. Attending any prebid meetings schedule by the owner.
- 6. Providing assistance in getting required bonding or insurance or providing alternatives to bonding or insurance for subcontractors.
- 7. Negotiating in good faith with interested minority businesses and not rejecting them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8. Providing assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisting minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9. Negotiating joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10. Providing quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

A Good Faith effort will be deemed met by any Bidder who attempts at least 5 of the above described efforts.

If the MBE subcontract goals are not achieved, the Bidder shall provide the following documentation to the Owner (upon request within 72 hours after notification of being low bidder).

- Copies of solicitations for quotes to at least three (3) MBE firms from the source list provided by the State's Office for Historically Underutilized Businesses (Address: 1336 Mail Service Center, Raleigh, North Carolina 27699-1336; Phone/Fax: 919-807-2330) for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location date and time when quotes mist be received.
- 2. Copies of quotes or responses received from each firm responding to the solicitation.
- 3. A telephone log of follow-up calls to each firm sent a solicitation.
- 4. For subcontracts where an MBE firm is not considered to be the lowest responsible subbidder, copies of quotes received from <u>all</u> firms submitting quotes for that particular subcontract.
- 5. Documentation of any contracts, correspondence or conversation with MBE firms made in an attempt to meet the goals.

SECTION G: SUBCONTRACT AWARD

Upon being named apparent low bidder, the Bidder shall provide a Letter of Intent, with a description of the scope of services and dollar value from each minority firm proposed for use in this contract. Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder. The Owner reserves the right to waive any irregularities in MBE documentation if they can be resolved prior to award of the contract, and the Owner finds it to be in the best interest to do so and award the contract.

SECTION H: SUBCONTRACTOR PAYMENT REQUIREMENTS:

North Carolina General Statute 143-134.1 states that the percentage retainage on payments made by the prime contractor to the subcontractor shall not exceed the percentage of retainage on payment made by the Owner to the prime contractor. Failure to comply with this provision shall be considered a breach of the contract, and the contract may be terminated in accordance with the termination provisions of the contract.

The Contractor shall provide an itemized statement of payments (Appendix E) to each MBE subcontractor with each request for payment or before final payment is processed.

SECTION I: AWARD OF CONTRACT

The Award of Contract will be made without regard to race, religion, color, creed, national origin, sex, age, or handicapping condition, as defined in G.S. 168A-3. Nothing in this section shall be construed to require contractors or awarding authorities to award contracts or subcontracts to or to make purchases of materials or equipment from minority-business contractors or minority-business subcontractors who do not submit the lowest responsible, responsive bid or bids.

SECTION J: RECORDS:

Bidders who are awarded contracts shall maintain records of all documentation relative MBE contract provisions for a period of not less than three (3) years from the date of completion of this project.

Identification of HUB Certified/ Minority Business Participation

Work Type	*Minority Category	**HUB Certified (Y/N)
		-
		J
	Work Type	

The total value of minority business contracting will be (\$)______

State of North Carolina AFFIDAVIT A - List of the Good Faith Effort

Town of Kernersville – Shields Rd., Kernersville, NC 27284

Affidavi	
	(Name of Bidder) I have made a good faith effort to comply under the following areas checked: (A minimum of 5 areas must be checked in order to have achieved a "good faith effort")
	1-Contacted minority businesses that reasonably could have expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
	2-Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
	3-Broken down or combined elements of work into economically feasible units to facilitate minority participation.
	4-Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority business.
	5-Attended prebid meetings scheduled by the public owner.
	6-Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
	7-Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
	8-Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
	9-Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
	10-Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cashflow demands.
Minority provision The und	dance with GS 143-128.2(d) the undersigned will enter into a formal agreement with the firms listed in the Identification of Business Participation schedule conditional upon execution of a contract with the Owner. Failure to abide by this statutory n will constitute a breach of the contract. ersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the o the commitment herein set forth.
Date:	Name of Authorized Officer
	Signature:
SE	State of North Carolina, County of Subscribed and sworn to before me thisday of20 Notary Public My commission expires

State of North Carolina AFFIDAVIT B - Intent to Perform Contract with Own Workforce

Town of Kernersville – Shields Rd., Kernersville, NC 27284

Affidavit of		
	(Name of Bidd	er)
I hereby certify that	t it is our intent to perform 100% of the work req	uired for
the	(Name of Project)	contract.
	(Name of Project)	
project, and normal	fication, the Bidder states that the Bidder does not perform and has the capability to perform and arrent work forces; and	ot customarily subcontract elements of this type d will perform all elements of the work on this project
The Bidder agrees t statement.	o provide any additional information or document	ntation requested by the owner in support of the above
The undersigned he commitments herei	reby certifies that he or she has read this certifican contained.	ation and is authorized to bind the Bidder to the
Date:	Name of Authorized Officer:	
	Signature:	
	Title:	
SEAL	State of North Carolina, County ofSubscribed and sworn to before me thisNotary PublicMy commission expires	

APPENDIX E

MBE DOCUMENTATION FOR CONTRACT PAYMENTS

Prime Contractor/Architec	ι:				
Address & Phone:					
Project Name:					
Pay Application #:		Period:			
The following is a list of p the above-mentioned perion		to minority busi	ness contractors o	on this project fo	
MBE Firm Name	MBE Type	Amount Paid this Period	Total Payments to Date	Total Amount Committed	
	male (F) Socially and Ec	onomically Disadv	vantaged (D)	erican Indian (I),	
Date:	Approved	/Certified By: _	Name		
			Title		
			Signa	 iture	

SUBMIT DOCUMENT WTH EACH PAY REQUEST & FINAL PAYMENT



TREASURER

NORTH CAROLINA DEPARTMENT OF STATE TREASURER

STATE AND LOCAL GOVERNMENT FINANCE DIVISION AND THE LOCAL GOVERNMENT COMMISSION

> GREGORY C. GASKINS DEPUTY TREASURER

Memorandum # 2016-10

TO: All Local Governments, Public Authorities and Their Independent Auditors

FROM: Sharon Edmundson, Director, Fiscal Management Section

SUBJECT: Iran Divestment Act Notice for Local Governments in North Carolina

DATE: February 17, 2016

The North Carolina Department of State Treasurer is providing this letter to Local Government Units to explain new contracting and procurement compliance obligations created by the <u>Iran Divestment Act of 2015</u> (N.C.G.S. 143C-6A-1 to 6A-9).* Local Government Units should be aware that effective February 26, 2016, this law imposes new obligations on each new bid process, each new contract, and each renewal or assignment of an existing contract. The specific requirements are as follows:

- 1. Local Government Units must obtain a one-page mandatory certification under the Act. (See sample "Contract Certification" form below for details.)
- 2. Local Government Units may not enter into contracts with any entity or individual found on the State Treasurer's Iran Final Divestment List. This list will be posted on the Department of State Treasurer's website on February 26, 2016 and will be updated every 180 days. (See "Contract Restrictions" below for details.)

Background

The Iran Divestment Act's requirements applicable to Local Government Units** will become effective on February 26, 2016, at the time the State Treasurer publishes the first list of prohibited companies and individuals (a "Final Divestment List") under the Act.

http://www.ncleg.net/Sessions/2015/Bills/Senate/PDF/S455v5.pdf

^{*}The Iran Divestment Act of 2015 can be found online at:

^{**} The Act's requirements use the term "State agency." G.S. 143C-6A-3(7) provides that in the act, the term "State agency" includes not only State departments, boards, and commissions, but also "any political subdivision of the State" such as a Local Government Unit.

Memorandum #2016-10 Iran Divestment Act February 17, 2016 Page 2

Final Divestment List

The Department of State Treasurer develops the Final Divestment List using data from a research vendor, U.S. federal sanctions lists, and other credible information available to the public. It consists of any individual or company, including parent entities and majority owned subsidiaries, that:

- Provided goods or services of \$20,000,000 or more within any 12-month period in the energy sector of Iran during the preceding five years;
- Extended \$20,000,000 or more in credit, under certain circumstances, to another
 individual or company that will use the credit to provide goods or services in the energy
 sector in Iran. (G.S. 143C-6A-3(4).)

The Department of State Treasurer will update the Final Divestment List at least every 180 days. The list will be published on the State Treasurer's website at www.nctreasurer.com/Iran and periodically circulated to Local Government Units.

Requirement 1: Contract Certification

For new procurements and new, renewed, or assigned contracts on or after February 26, 2016, each Local Government Unit must obtain a simple certification from each bidder or vendor. The bidder or vendor must affirm that it is not listed on the State Treasurer's Final Divestment List found at www.nctreasurer.com/Iran as of the date of signature. The certification is due at the time a bid is submitted or the time a contract is entered into, renewed, or assigned. (G.S. 143C-6A-5(a).)

We have attached on the next page a short form that can be used for this certification, but Local Government Units are free to instead use their own form or put the required certification in the text of a contract or purchase order. Each Local Government Unit shall maintain its own records demonstrating these certifications.

Requirement 2: Restriction on Contracting

Individuals or companies on the Final Divestment List are ineligible to contract or subcontract with Local Government Units. (G.S. 143C-6A-6(a).) Any existing contracts with these Iran-linked persons will be allowed to expire in accordance with the contract's terms. (G.S. 143C-6A-6(c).)

Contracts valued at less than \$1,000.00 are exempt from this restriction. (G.S. 143C-6A-7(a).) In addition, a Local Government Unit may contract with a listed individual or company if it makes a good-faith determination that (1) the commodities or services are necessary to perform its functions and (2) that, absent such an exemption, it would be unable to obtain those commodities or services. (G.S. 143C-6A-7(c).) Local Government Units shall enter such exemptions into the procurement record.

RFP Number (if applicable):	
Name of Vendor or Bidder:	
IRAN DIVESTMENT ACT CERTIFIC REQUIRED BY N.C.G.S. 143C-6A-5	77.73.75.10
created by the State Treasurer pursuant to f	bidder listed above is not listed on the Final Divestment List N.C.G.S. 143-6A-4. or she is authorized by the vendor or bidder listed above to
make the foregoing statement.	is site is authorized by the vendor or bidder listed above to
Signature	Date
Printed Name	
Timed Name	Title

Notes to persons signing this form:

N.C.G.S. 143C-6A-5(a) requires this certification for bids or contracts with the State of North Carolina, a North Carolina local government, or any other political subdivision of the State of North Carolina. The certification is required at the following times:

- When a bid is submitted
- When a contract is entered into (if the certification was not already made when the vendor made its bid)
- When a contract is renewed or assigned

N.C.G.S. 143C-6A-5(b) requires that contractors with the State, a North Carolina local government, or any other political subdivision of the State of North Carolina must <u>not</u> utilize any subcontractor found on the State Treasurer's Final Divestment List.

The State Treasurer's Final Divestment List can be found on the State Treasurer's website at the address www.nctreasurer.com/lran and will be updated every 180 days.

QUALIFICATIONS STATEMENT

THE INFORMATION SUPPLIED IN THIS DOCUMENT IS CONFIDENTIAL TO THE EXTENT PERMITTED BY LAWS AND REGULATIONS

1.	SUBMITTED BY:	
	Official Name of Firm:	
	Address:	
2.	SUBMITTED TO:	Town of Kernersville
3.	SUBMITTED FOR:	
	TYPE OF WORK:	
4.	CONTRACTOR'S CONTACT I	NFORMATION
	Contact Person:	
	Title:	
	Phone:	
	Email:	
5.	AFFILIATED COMPANIES:	
	Name:	
	Address:	
		<u> </u>

6.	TYPE (OF ORGANIZATION:	
		SOLE PROPRIETORSHIP	
		Name of Owner:	
		Doing Business As:	
		Date of Organization:	
		PARTNERSHIP	
		Date of Organization:	
		Type of Partnership:	
		Name of General Partner(s):	
		CORPORATION	
		State of Organization:	
		Date of Organization:	
		Executive Officers:	
		- President:	
		- Vice President(s):	
		- Treasurer:	
		- Secretary:	
		LIMITED LIABILITY COMPANY	
		State of Organization:	
		Date of Organization:	
		Members:	

JOINT VENTURE	
Sate of Organization:	
Date of Organization:	
Form of Organization:	
Joint Venture Managing Partner	
- Name:	
- Address:	
Joint Venture Managing Partner	
- Name:	
- Address:	
Joint Venture Managing Partner	
- Name:	
- Address:	

7.	LICENSING				
		Jurisdiction:		·····	
		Type of License:			
		License Number:			
8.	CERTIFICATION	ONS		CERTIFIED BY:	
		Disadvantage Business Enterprise:			
		Minority Business Enterprise:			
		Woman Owned Enterprise:			
		Small Business Enterprise:		1 to 1 to 1	
		Other ():		
9.	BONDING IN	FORMATION			
		Bonding Company:			
		Address:			
		2 2			
		Bonding Agent:			
		Address:		<u>la</u>	
		Contact Name:			
		Phone:			
		Aggregate Bonding Capacity:			
		Available Bonding Capacity as of dat	te of th	is submittal:	

10.	FINANCIAL INFORMATION
	Financial Institution:
	Address:
	Account Manager:
	Phone:
	INCLUDE AS AN ATTACHMENT AN AUDITED BALANCE SHEET FOR EACH OF THE LAST 3 YEARS
11.	CONSTRUCTION EXPERIENCE:
	Current Experience:
	List on Schedule A all uncompleted projects currently under contract (If Joint Venture list each participant's projects separately).
	Previous Experience:
	List on Schedule B all projects completed within the last 5 Years (If Joint Venture list each participant's projects separately).
	Has firm listed in Section 1 ever failed to complete a construction contract awarded to it?
	YES NO
	If YES, attach as an Attachment details including Project Owner's contact information.
	Has any Corporate Officer, Partner, Joint Venture participant or Proprietor ever failed to complete a construction contract awarded to them in their name or when acting as a principal of another entity?
	YES NO
	If YES, attach as an Attachment details including Project Owner's contact information.
	Are there any judgments, claims, disputes or litigation pending or outstanding involving the firm listed in Section 1 or any of its officers (or any of its partners if a partnership or any of the individual entities if a joint venture)?
	YESNO

If YES, attach as an Attachment details including Project Owner's contact information.

12. SAFETY PROGRAM:

nclude the following a	as attachments:		
Suppliers furnishin	g or performing W	r's (and Contractor's proposed Subcontractor fork having a value in excess of 10 percent of Summary of Work-Related Injuries & Illnesses	the total
Provide as an Attac	chment Contractor	r's (and Contractor's proposed Subcontractor	s and
		ork having a value in excess of 10 percent of	
amount of the Bid)	list of all OSHA Ci	tations & Notifications of Penalty (monetary o	or other)
received within the	e last 5 years (indic	rate disposition as applicable) - <u>IF NONE SO S</u>	TATE.
Provide as an Attac	chment Contractor	r's (and Contractor's proposed Subcontractor	s and
		ork having a value in excess of 10 percent of	
		tations or violations under any state all receiv	
amount of the Bid)	list of all safety ci		
		as applicable) - <u>IF NONE SO STATE.</u>	7,78 14,522-168
the last 5 years (inc	dicate disposition a	as applicable) - <u>IF NONE SO STATE.</u>	
the last 5 years (income of the last 5 years). Provide the following the terms of the following the same of the following the last 5 years (income of the last 5 years).	dicate disposition a	ed in Section V (and for each proposed Subco	ontractor
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the last 5 years (inc Provide the followi furnishing or perfo	dicate disposition a ing for the firm list rming Work havin	ed in Section V (and for each proposed Subco	ontractor
the last 5 years (ind Provide the followi furnishing or perfo the Bid) the followi	dicate disposition a ing for the firm list rming Work having ing (attach additio	ed in Section V (and for each proposed Subco g a value in excess of 10 percent of the total a	entractor amount o
the last 5 years (ind Provide the followi furnishing or perfo the Bid) the followi	dicate disposition a ing for the firm list rming Work having ing (attach additio	ed in Section V (and for each proposed Subco g a value in excess of 10 percent of the total a nal sheets as necessary):	entractor amount o
the last 5 years (ind Provide the followi furnishing or perfo the Bid) the followi	dicate disposition a ing for the firm list rming Work having ing (attach additio ensation Experien	ed in Section V (and for each proposed Subco g a value in excess of 10 percent of the total a nal sheets as necessary): ce Modification Rate (EMR) for the last 5 yea	entractor amount o
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the last 5 years (ind Provide the followi furnishing or perfo the Bid) the followi	dicate disposition a ing for the firm list rming Work having ing (attach addition ensation Experien YEAR YEAR	ed in Section V (and for each proposed Subco g a value in excess of 10 percent of the total a nal sheets as necessary): ce Modification Rate (EMR) for the last 5 yea EMR	entractor amount o
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the last 5 years (inc Provide the followi furnishing or perfo the Bid) the followi Workers' comp	dicate disposition a ing for the firm list rming Work having ing (attach addition ensation Experien YEAR YEAR YEAR YEAR YEAR YEAR YEAR	ed in Section V (and for each proposed Subcognation of the total and sheets as necessary): ce Modification Rate (EMR) for the last 5 years: EMR EMR EMR EMR EMR EMR EMR EM	entractor amount o
the last 5 years (inc Provide the followi furnishing or perfo the Bid) the followi Workers' comp	dicate disposition a ing for the firm list rming Work having ing (attach addition ensation Experien YEAR YEAR YEAR YEAR YEAR YEAR YEAR YEAR	ed in Section V (and for each proposed Subcognation of the total and sheets as necessary): ce Modification Rate (EMR) for the last 5 years: EMR EMR EMR EMR EMR TRFR TRFR	entractor amount o
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	Total fidiliber of filali-	nodis worked for the last 5 fears.
	YEAR	TOTAL NUMBER OF MAN-HOURS
	YEAR	TOTAL NUMBER OF MAN-HOURS
	YEAR	TOTAL NUMBER OF MAN-HOURS
	YEAR	TOTAL NUMBER OF MAN-HOURS
	YEAR	TOTAL NUMBER OF MAN-HOURS
	performing Work having a Away From Work, Days of the particular industry or t	DART DART DART DART
13.	EQUIPMENT:	
	MAJOR EQUIPMENT:	
	List on Schedule C all pieces of	f major equipment available for use on Owner's Project.

I HEREBY CERTIFY THAT THE INFORMATION SUBMITTED HEREWITH, INCLUDING ANY ATTACHMENTS, IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NAME OF ORGANIZATION:
BY:
TITLE:
DATED:
NOTARY ATTEST:
SUBSCRIBED AND SWORN THIS DAY OF, 20
NOTARY PUBLIC - STATE OF
MY COMMISSION EXPIRES:

REQUIRED ATTACHMENTS

- 1. Schedule A (Current Experience). Provide upon request by Engineer or Owner
- 2. Schedule B (Previous Experience). Provide upon request by Engineer or Owner
- 3. Schedule C (Major Equipment). Provide upon request by Engineer or Owner
- 4. Audited balance sheet for each of the last 3 years for firm named in Section 1. <u>Provide upon</u> request by Engineer or Owner
- 5. Evidence of authority for individuals listed in Section 7 to bind organization to an agreement.

 Provide upon request by Engineer or Owner
- Resumes of officers and key individuals (including Safety Officer) of firm named in Section 1.
 <u>Provide upon request by Engineer or Owner</u>
- 7. Required safety program submittals listed in Section 12.
- 8. Additional items as pertinent.

SCHEDULE A PROVIDE UPON REQUEST BY ENGINEER

CURRENT EXPERIENCE

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

SCHEDULE B PROVIDE UPON REQUEST BY ENGINEER

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Include ALL Projects Completed within last Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

SCHEDULE B PROVIDE UPON REQUEST BY ENGINEER

PREVIOUS EXPERIENCE (Include	ALL Projects Completed within last 5 years	s)				
Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name:	Name:				
	Address:	Company:				
	Telephone:	Telephone:				
	тегерпопе.	тегерпопе.				
	Name:	Name:				
	Address:	Company:				
	Telephone:	Telephone:				
	Name:	Name:				
	Address:	Company:				
	Telephone:	Telephone:				
	Name:	Name:				
	Address:	Company:				
	Telephone:	Telephone:				
	Name:	Name:				
	Address:	DVIDE UPON REQUEST BY	ENGINEER			
	Telephone:	Telephone:	LINGINEER			
	Name:	Name:				
	Address:	Company:				
	Telephone:	Telephone:				
	Name:	Name:				
	Address:	Company:				
	Telephone:	Telephone:				
	reiepriorie.	тетернопе.				

SCHEDULE C - LIST OF MAJOR EQUIPMENT AVAILABLE

ITEM	PURCHASE DATE	CONDITION	ACQUIRED VALUE
	DDOVIDE UDON DEGUE	OT DY ENGINEED	
	PROVIDE UPON REQUES	ST BY ENGINEER	

POWER OF ATTORNEY

(Attach to this sheet)

CERTIFICATE OF INSURANCE

(Attach to this sheet)

CERTIFICATE OF FINANCE OFFICER

	o fall due under this agreement have been made by appropriation rized, as required by the "Municipal Fiscal Control Act."
Finance Officer	
Date	<u> </u>



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

August 11, 2025

Forsyth County: SR 2640 – Shields Road.

Subject: Right of Way Encroachment Contract – R/W 16.6 – Job Number - E092-034-25-

00173 – Relocation of 12" waterline with existing waterline to be abandoned in place, and installation of 8" sanitary sewer extension through steel encasement, along with associated appurtenances, by jack and bore method.

Mr. Brad Wall Summit Design and Engineering 320 Executive Court Hillsborough, NC 27278

Dear Mr. Wall:

Attached, for your file, is a copy of the above referenced Right of Way Encroachment Contract, properly executed. This contract covers the following:

Relocation of 12" waterline with existing waterline to be capped, disconnected and abandoned in place, along with the installation of +/- 70 LF of 8" sanitary sewer extension through steel encasement, along with associated appurtenances, by jack and bore method, along and under SR 2640 Shields Road, as shown on the attached plans.

APPROVED SUBJECT TO: Attached Special Provisions

ENVIRONMENTAL ISSUES AGREEMENT

The encroaching party shall comply with all applicable state and federal environmental regulations, and shall obtain all necessary state, federal and local environmental permits, including but not limited to, those related to sediment control, storm water, wetlands, streams, endangered species, and historical sites.

Sincerely,

-DocuSigned by:

Kevin Hedrick

Kevin R. Hedrick, PE, CPM District Engineer

KRH/dpb

cc: Kevin Neal, PE • Forsyth County Maintenance Engineer

Mailing Address: NC DEPARTMENT OF TRANSPORTATION DIVISION NINE / DISTRICT TWO SILAS CREEK PARKWAY WINSTON-SALEM, NC 27127 Telephone: (336) 747-7900 Fax: (336) 761-2004 Customer Service: 1-877-368-4968

375 SILAS CREEK PARKWAY WINSTON-SALEM, NC 27127

R/W 16.6 E092-034-25-00173

- 1. Approval may be rescinded upon failure to follow any of the provisions in this permit and may be considered a violation of the encroachment agreement.
- 2. The Encroaching party or their contractor shall provide the following notices prior to construction activity within the NCDOT Right of Way:
 - a. Three (3) business days advance phone call at telephone (336) 896-2350 to the Forsyth County Maintenance office

Failure to provide these notifications prior to beginning construction is subject to the Division Engineer's discretion to cease construction activity for this encroachment. NCDOT reserves the right to cease any construction or maintenance work associated with this installation by the encroaching party until the construction or maintenance meets the satisfaction of the Division Engineer or their representative.

- 3. Prior to beginning work, it is the requirement of the Encroaching Party to contact the appropriate Utility Companies involved and make arrangements to adjust or relocate any utilities that conflict with the proposed work.
- 4. It shall be the responsibility of the encroaching party to determine the location of utilities within the encroachment area. NCGS § 87-115 through § 87-130 of the Underground Utility Safety and Damage Prevention Act requires underground utilities to be located by calling 811 prior to construction. The encroaching party shall be responsible for notifying other utility owners and providing protection and safeguards to prevent damage or interruption to existing facilities and maintain access to them.
- 5. At the discretion of the District Engineer, the encroaching party (not the utility contractor) shall make arrangements to have a qualified inspector, under the supervision of a Professional Engineer registered in North Carolina, on site at all times during construction. The registered Professional Engineer shall be required to submit a signed and PE sealed certification that the utility was installed in accordance with the encroachment agreement.
- 6. This approval and associated plans and supporting documents shall not be interpreted to allow any design change or change in the intent of the design by the Owner, Design Engineer, or any of their representatives. Any revisions or changes to these approved plans or intent for construction must be obtained in writing from the Division Engineer's office or their representative prior to construction or during construction, if an issue arises during construction to warrant changes.
- 7. NCDOT does not guarantee the right of way on this road, nor will it be responsible for any claim for damages brought about by any property owner by reason of this installation. It is the responsibility of the encroaching party to verify the right of way.
- 8. Encroaching party shall be responsible for obtaining all necessary permanent and/or temporary construction, drainage, utility and/or sight distance easements.
- 9. All Right of Way and easements necessary for construction and maintenance shall be dedicated to NCDOT with proof of dedication furnished to the District Engineer prior to beginning work.
- 10. Traffic control shall be coordinated with the Forsyth County Maintenance Office at telephone (336) 896-2350, prior to construction.

R/W 16.6 E092-034-25-00173

11. WORK ZONE TRAFFIC CONTROL QUALIFICATIONS AND TRAINING PROGRAM

All personnel performing any activity inside the highway right of way are required to be familiar with the NCDOT Maintenance / Utility Traffic Control Guidelines (MUTCG). No specific training course or test is required for qualification in the Maintenance /Utility Traffic Control Guidelines (MUTCG).

All flagging, spotting, or operating Automated Flagger Assist Devices (AFAD) inside the highway right of way requires qualified and trained Work Zone Flaggers. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

All personnel involved with the installation of Work Zone Traffic Control devices inside the highway right of way are required to be qualified and trained Work Zone Installers. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

All personnel in charge of overseeing work zone Temporary Traffic Control operations and installations inside the highway right of way are required to be qualified and trained Work Zone Supervisors. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

For questions and/or additional information regarding this training program please refer to https://connect.ncdot.gov/projects/WZTC/Pages/Training.aspx or call the NCDOT Work Zone Traffic Control Section (919) 814-5000.

- 12. The party of the second part shall employ traffic control measures that are in accordance with the prevailing federal, state, local, and NCDOT policies, standards, and procedures. These policies, standards, and procedures include, but are not limited to the following:
 - a. Manual on Uniform Traffic Control Devices (MUTCD) North Carolina has adopted the MUTCD to provide basic principles and guidelines for traffic control device design, application, installation, and maintenance. North Carolina uses the MUTCD as a minimum requirement where higher supplemental standards specific to North Carolina are not established. Use fundamental principles and best practices of MUTCD (Part 6, Temporary Traffic Control).
 - b. NCDOT Maintenance / Utility Traffic Control Guidelines This document enhances
 the fundamental principles and best practices established in MUTCD Part 6,
 Temporary Traffic Control, incorporating NCDOT-specific standards and details.
 It also covers important safety knowledge for a wide range of work zone job
 responsibilities.
- 13. If the Traffic Control Supervisor determines that portable concrete barrier (PCB) is required to shield a hazard within the clear zone, then PCB shall be designed and sealed by a licensed North Carolina Professional Engineer. PCB plans and design calculations shall be submitted to the District Engineer for review and approval prior to installation.
- 14. Ingress and egress shall be maintained to all businesses and dwellings affected by the project. Special attention shall be paid to police, EMS and fire stations, fire hydrants, secondary schools, and hospitals.

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- 15. Traffic shall be maintained at all times. All lanes of traffic are to be open during the hours of 7:00 A.M. to 9:00 A.M. and from 4:00 P.M. to 6:00 P.M. Monday through Friday, during any time of inclement weather, or as directed by the County Maintenance Engineer. Any violation of these hours will result in ceasing any further construction by the Encroaching Party or their contractor.
- 16. Nighttime and weekend operations will NOT be allowed unless written approval is received from the District Engineer. If nighttime or weekend work is allowed or required, all signs must be retro-reflective,
- 17. Two-way traffic shall be maintained at all times unless designated by the County Maintenance Engineer. Traffic shall not be rerouted or detoured without prior written approval from the County Maintenance Engineer. No utility work will be allowed on state holidays from 7:00 PM the night before through 9:00 AM the day prior to, following or during local events without prior approval from the County Maintenance Engineer. If the construction is within 1000 feet of a school location or on a designated bus route, the construction shall be coordinated with the school start and end times to avoid traffic delays.
- 18. Work requiring lane or shoulder closures shall not be performed on both sides of the road simultaneously within the same area.
- 19. Any work requiring equipment or personnel within 5 feet of the edge of any travel lane of an undivided facility and within 10 feet of the edge of any travel lane of a divided facility shall require a lane closure with appropriate tapers per current *NCDOT Roadway Standard Drawings or MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES*.
- 20. At the discretion of the District Engineer, a traffic control plan shall be developed and submitted under the seal and signature of a Licensed North Carolina Professional Engineer prior to construction. The plan shall be specific to the site and adequately detailed. Issues such as the close proximity to intersections shall be addressed.
- 21. Any pavement markings that are damaged or obliterated shall be restored by the encroaching party at no expense to NCDOT.
- 22. Sidewalk closures shall be installed as necessary. Pedestrian traffic shall be detoured around these closures and shall be signed appropriately and in accordance with The American with Disabilities Act Accessibility Guidelines. The encroaching party must adhere to the guidelines for accommodating pedestrians in encroachment work zones as described in the NCDOT Pedestrian Work Zone Accommodations Training found at https://www.youtube.com/watch?v=AOuYa5IW3dg&feature=youtu.be
- 23. The encroaching party shall comply with all applicable Federal, State and local environmental regulations and shall obtain all necessary Federal, State and local environmental permits, including but not limited to, those related to sediment control, stormwater, wetland, streams, endangered species and historical sites. Additional information can be obtained by contacting the NCDOT Roadside Environmental Engineer regarding the North Carolina Natural Heritage Program or the United States Fish and Wildlife Services. Contact the Division Roadside Environmental Engineer's Office at 336-896-2380.
- 24. All erosion control devices and measures shall be constructed, installed, maintained, and removed by the Encroacher in accordance with all applicable Federal, State, and Local laws, regulations, ordinances, and policies. Permanent vegetation shall be established on all disturbed areas in accordance with the recommendations of the Division Roadside Environmental Engineer. All areas disturbed (shoulders, ditches, removed accesses, etc.)

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shall be graded and seeded in accordance with the latest *NCDOT Standards Specifications for Roads and Structures* and within 15 calendar days with an approved NCDOT seed mixture (all lawn type areas shall be maintained and reseeded as such). Seeding rates per acre shall be applied according to the Division Roadside Environmental Engineer. Any plant or vegetation in the NCDOT planted sites that is destroyed or damaged as a result of this encroachment shall be replaced with plants of like kind or similar shape.

- 25. The contractor shall not begin the construction until after the traffic control and erosion control devices have been installed to the satisfaction of the County Maintenance Engineer or their agent.
- 26. The contractor shall perform all monitoring and record keeping and any required maintenance of erosion and sediment control measures to maintain compliance with stormwater regulations.
- 27. An executed copy of the encroachment agreement, provisions and approved plans shall be present at the construction site at all times. If safety or traffic conditions warrant such an action, NCDOT reserves the right to further limit, restrict or suspend operations within the right of way.
- 28. The Encroaching Party and/or their Contractor shall comply with all OSHA requirements. If OSHA visits the work area associated with this encroachment, the District Office shall be notified by the encroaching party immediately if any violations are cited.
- 29. All disturbed areas are to be fully restored to current NCDOT minimum roadway standards or as directed by the Division Engineer or their representative. Disturbed areas within NCDOT Right-of-Way include, but not limited to, any excavation areas, pavement removal, drainage or other features.
- 30. Only if approved by the District Office, any approved pavement cuts for the installation of these utilities shall be repaired in by open cut repair method "Option A" or "Option D", as directed by the County Maintenance Engineer.
- 31. Once flowable fill has been placed and a steel plate has been installed, the steel plate shall be in place no longer than three (3) calendar days.
- 32. A minimum of 5 feet clearance is required for utility installations beneath or near drainage pipes, headwalls, and a minimum of two-foot clearance below the flowline of streams. If directional drilling, a minimum ten-foot clearance distance is required from drainage structures and a minimum of 5 feet below flowline of streams.
- 33. The encroaching party shall notify the County Maintenance Engineer or their representative immediately in the event any drainage structure is blocked, disturbed or damaged. All drainage structures disturbed, damaged or blocked shall be restored to their original condition as directed by the Division Engineer or their representative.
- 34. At points where the utility is placed under existing storm drainage, the trench will be backfilled with excavatable flowable fill up to the outside diameter of the existing pipe.
- 35. Unless specified otherwise, during non-working hours, equipment shall be located away from the job site or parked as close to the right of way line as possible and be properly barricaded in order not to have any equipment obstruction within the Clear Recovery Area. Also, during non-working hours, no parking or material storage shall be allowed along the shoulders of any state-maintained roadway.

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- 36. Right of Way monuments disturbed during construction shall be referenced by a registered Land Surveyor and reset after construction.
- 37. All Traffic signs moved during construction shall be reinstalled as soon as possible to the satisfaction of the Division Engineer or their representative.
- 38. All traffic control, asphalt mixes, structures, construction, workmanship and construction methods, and materials shall be in compliance with the most-recent versions of the following resources: ASTM Standards, Manual on Uniform Traffic Control Devices, NCDOT Utilities Accommodations Manual, NCDOT Standard Specifications for Roads and Structures, NCDOT Roadway Standard Drawings, NCDOT Asphalt Quality Management System manual, and the approved plans.
- 39. All utility access points, such as manholes, vaults, handholes, splice boxes and junction boxes shall be located as close to the right of way line as possible and shall not be placed in the ditch line, side slopes of the ditches or in the pavement. All manholes, handholes, splice boxes, junction boxes and vaults and covers shall be flush with the ground when located within the vehicle clear zone. Slack loops for telecommunications in industry standard housing units shall be buried a minimum of 18 inches when buried or meet minimum NCDOT vertical and horizontal clearances when installed aerially.
- 40. Excavation material shall not be placed on pavement.
- 41. It is the responsibility of the encroaching party or their contractor to prevent any mud/dirt from tracking onto the roadway. Any dirt which may collect on the roadway pavement from equipment and/or truck traffic on site shall be immediately removed to avoid any unsafe traffic conditions.
- 42. Any pavement damaged because of settlement of the pavement or damaged by equipment used to perform encroachment work, shall be re-surfaced to the satisfaction of the District Engineer. This may include the removal of pavement and a 50' mechanical overlay. All pavement work and pavement markings (temporary and final) are the responsibility of the Encroaching Party.
- 43. The Encroaching party shall notify the County Maintenance Engineer's office within 2 business days after construction is complete. The County Maintenance Engineer may perform a construction inspection. Any deficiencies may be noted and reported to the encroaching party to make immediate repairs or resolve any issues to restore the right-of-way to a similar condition prior to construction, including pavement, signage, traffic signals, pavement markings, drainage, structures/pipes, or other highway design features.
- 44. If the actual construction differs from the approved plans associated with this encroachment, a copy of "as-built" plans shall be submitted to the District Engineer's office in a PDF format and in a current ESRI GIS format within 4 weeks of construction.

SHEET INDEX	
COVER SHEET	C-1
EXISTING CONDITIONS AND DEMOLITION PLAN	
SHIELDS ROAD WATERLINE PLAN & PROFILE	C-3A
SHIELDS ROAD WATERLINE PLAN & PROFILE	C-3B
WATER & SEWER DETAILS	D-1
SITE & EROSION CONTROL DETAILS	D-2

SITE DEVELOPMENT PLANS

SHIELDS ROAD WATERLINE RELOCATION

SHIELDS ROAD KERNERSVILLE, NC 27284

VICINITY MAP

PUBLIC SERVICE CONTACTS:

GENERAL NOTES:

- CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH:
 WINSTON-SALEM PUBLIC WORKS TECHNICAL SPECIFICATIONS A DETAIL DRAWINGS FOR WATER LINE & SANITARY SEWER LINE CONSTRUCTION (JULY 2020)
 TOWN OF KERNERSVILLE DESIGN & CONSTRUCTION SPECIFICATIONS
 INCOOT STANDARD SPECIFICATIONS FOR ROADS & STRUCTURES AND INCOOT ROADWAY STANDARD DRAWINGS
- CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH ASSOCIATED SPECIFICATIONS AND ALL APPLICABLE AND THE MOST CURRENT CITY, COUNTY, STATE, AND UTILITY PROVIDER STANDARDS, SPECIFICATIONS AND BUILDING CODES.
- TRACTOR SHALL BE FULLY RESPONSIBLE FOR THE DEMOLITION OF ALL EXISTING ON SITE ITEMS, ABOVE AND BELOW GROUND. THE CONTRACTOR ESPONSIBLE FOR REMOVAL OF ALL WASTE RESULTING FROM DEMOLITION, AS WELL AS GRADING AND FILLING OF ALL DEPRESSIONS TO INSURE REMAINS ASSTHETICALLY ACCEPTABLE, SAFE AND FUNCTIONAL.
- THE CONTRACTOR SHALL GRADE, SEED AND SOD OR OTHERWISE PROVIDE TEMPORARY AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, ESPECIALLY SLOPES. SEE EROSION CONTROL INSTRUCTIONS, IF APPLICABLE.

- PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS INCESSARY FOR CONSTRUCTION. THE CONTRACTOR SHALL READ ALL PERMITS AND ENURS HAY CONSTRUCTION COMPLIES WITH THE PERMITS, REQUIRED PERMITS AND REVIEWS MAY INCLUDE. BLIT CARE NOT LIMITED TO CENTYCOUNT APPROVALS PERMITS, CITY FIRE DEPARTMENT, SOLID MASTE REVIEW, DRIVEWAY PERMITS, RICHET OF WAY ENCROACHMENT AGREEMENTS, SOLI AND EROSION CONTROL PERMITS, NOCICE PERMITS, WATER PERMITS, SEVER PERMITS, ENVIRONMENTAL PERMITS, WETLAND DISTURBANCE PERMITS, STREAM CROSSING PERMITS, POWER ASSEMENT ENCROACHMENT AGREEMENTS, USACE/OWN PERMITS, STREAMS CROSSING PERMITS, POWER ASSEMENT ENCROACHMENT AGREEMENTS. USACE/OWN PERMITS, AND ACCOUNT PERMITS ASSEMBLY ASSEMBLY
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IN ACCORDANCE WITH THE NC EROS SEDIMENT CONTROL PLANNING AND DESIGN MANUAL AND NC STORMWATER MANAGEMENT PROGRAM, A RESPONSIBLE OFFICIAL SHALL BE IN CHARGE OF THE LAND DISTURBING ACTIVITY AND ON THE WORK SITE AT ALL TIME.
- LL PRE-CAST UNITS SHALL BE NCDOT APPROVED, CERTIFICATION AND NCDOT STAMP WILL BE REQUIRED ON ALL UNITS, SHOP DRAWINGS SHALL BE UBMITTED TO ENGINEER AS A PACKAGE FOR REVIEW AND APPROVAL.
- 13. ALL CONSTRUCTION DEBRIS, MATERIALS, DUMPSTERS, ETC. SHALL BE LOCATED OUTSIDE THE RIGHT OF WAY.
- ALL COST FOR REMOVAL OF EXISTING PIPING SHALL BE INCLUDED IN THE PRICE FOR DEMOLITION & DISPOSAL. THIS WORK INCLUDES COMPLETE REMOVAL OF ALL LANDSCAPING, FIXTURES, UTILITIES, CURB, GUTTER, DRAINAGE PIPES, PAVEMENT AND BASE MATERIAL DOWN TO SUBGRADE ELEVATION, ANY ABANDONED PLUMBING OR WIRING SHALL BE CAPPED IN ACCORDANCE WITH APPLICABLE CODE(S) AND APPROVED BY THE ENGINEER.
- 16. COST FOR DISPOSAL OF ALL WASTE MATERIAL SHALL BE INCLUDED IN THE PRICE FOR DEMOLITION & DISPOSAL.
- 17. PRIOR TO EXCAVATING NEAR POLES THE CONTRACTOR SHALL NOTIFY THE OWNER AND OTHER POLE OCCUPANTS.

- NEW SANITARY SEWER MAINS AND MANHOLES SHALL BE TESTED AS REQUIRED BY AND IN ASSOCIATION WITH WINSTON-SALEM PUBLIC WORKS INSPECTIONS DEPARTMENT. ONCE APPROVED THE SERVICE CONNECTION SHALL BE MADE.



SITE LOCATION MAP



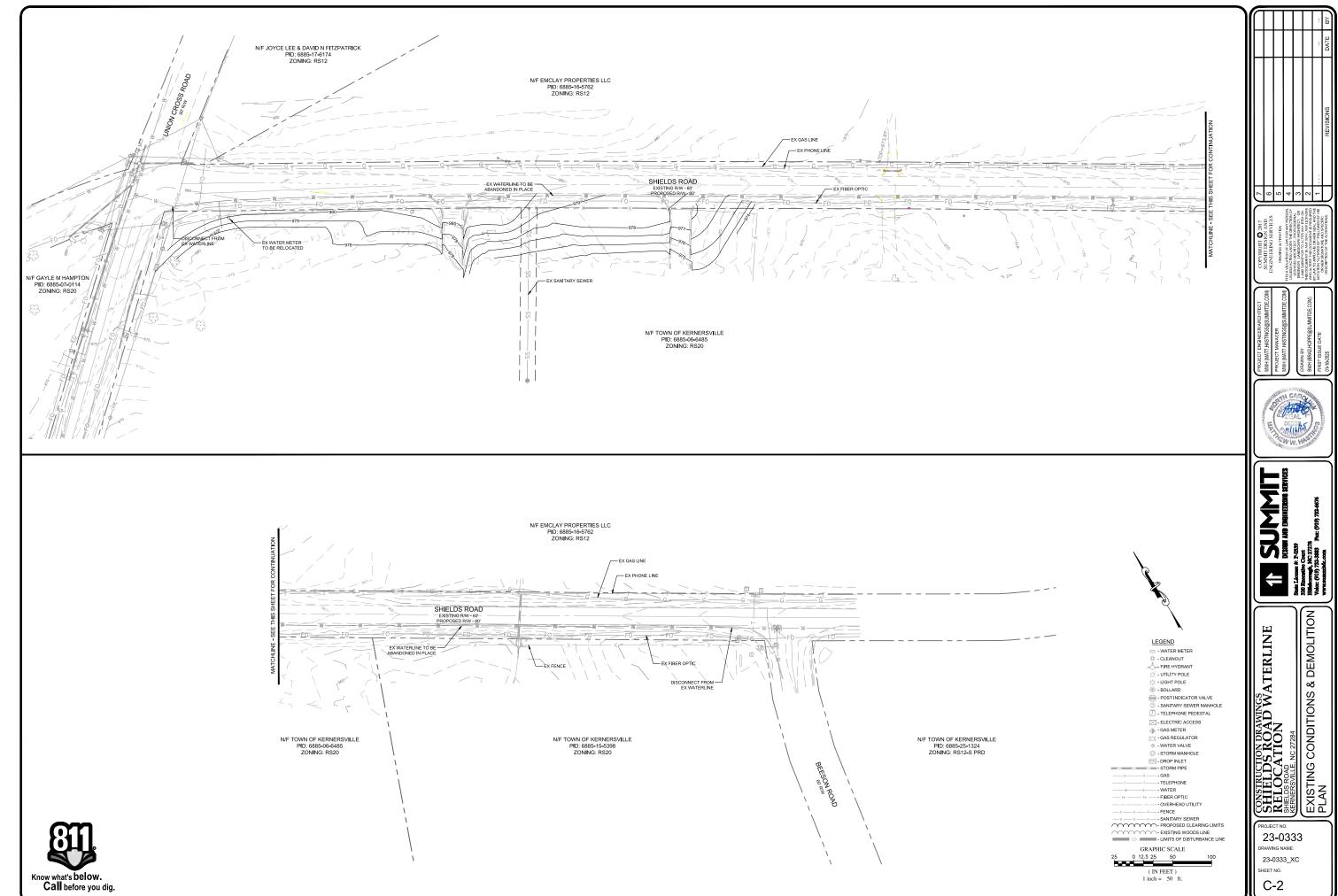




23-0333

23-0333 CS

S - 2



Docusign Envelope ID: 0A338DFB-BC26-428C-88F6-54FE960F9CA8 SITE NOTES: NOTES:

1. ALL SERVICES SHALL BE CONNECTED TO THE NEW MAIN ONCE THE LINE HAS BEEN INSTALLED, TESTED AND APPROVED FOR OPERATION. WATER SERVICE CONNECTIONS ARE SHOWN BELOW (SEE SYMBOL ON LEGEND) AT ALL CUSTOMERS WHERE THE SURVEYOR WAS ABLE TO LOCATE THE EXISTING METER BOX. SERVICES MUST ALSO BE CONNECTED TO CUSTOMERS WITH SERVICED CONNECTIONS WHERE THE METER BOXES WERE S - 31. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF KERNERSVILLE AND WINSTON-SALEMFORSYTH COUNTY UTILITY STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL DURING ALL PHASES OF CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY PERMITS NECESSARY FOR CONSTRUCTION.
4. CONTRACTOR SHALL MANDELTE ALL SITE WORK PRIGHT OF ADJACENT RESPONSIBLE FOR OBTAINING ANY PERMITS NECESSARY FOR CONSTRUCTION.
5. CONTRACTOR SHALL CAMPLETE ALL SITE WORK PRIGHT OF ACCEPTANCE. INCLUDING BUT NOT LIMITED TO DEMOLITION, DISPOSAL, MINOR GRADING, UTILITY REPLACEMENT, CONCRETE REPLACEMENT, PAVING, SEEDING, LANDSCAPING, ETC.
5. AT COMPRETION LANDSCAPING AND SITE WORK SHALL BE FREE OR DEBRIS, MOWED, AND IN LIKE NEW CONDITION. IF CONFLICTS EXIST BETWEEN GRAVITY SANITARY OR STORMWATER PIPING THE CONTRACTOR SHALL INSTALL WATERLINE BENEATH WITH PROPER CLEARANCE (24" MINIMUM).

EXISTING WATERLINE AND SERVICES TO REMAIN IN SERVICE UNTIL NEW WATER MAIN HAS BEEN INSTALLED, TESTAL WATERLINE AND APPROVED FOR OPERATION. AFTER APPROVAL SERVICES TO BE CONNECTED TO NEW MAIN AND ORIGINAL PIPING TO BE ABANDONED IN PLACE.

ABANDONED WATERLINES TO REMAIN IN PLACE, HOWEVER, HYDRAMTS, VALVES, METER BOXES AND OTHER ABOVE GROUND ITEMS NO LONGER IN USE TO BE REMOVED AND DISPOSED OF, SALVAGE VALUE TO BE INCLUDED IN CONTRACTOR'S BIOT PRICE.

VERTICAL ADJUSTMENT OF WATERLINE MAY BE ALLOWED TO AVOID EXISTING WATERLINE AND SERVICES AS LONG AS A MINIMUM OF 3" OF COVER IS MAINTAINED. UTILITY NOTES: 1. ALL NEW UTILITIES SHALL BE LOCATED UNDERGROUND IF ALLOWED BY LOCAL CODES.
2. ALL PUBLIC UTILITIES AND CONNECTIONS TO PUBLIC UTILITIES SHALL CONFORM TO WINSTON-SALEM/FORSYTH COUNTY UTILITY STANDARDS AND SPECIFICATIONS.
3. THE CONTRACTOR SHALD BE RESPONSIBLE FOR DETAINING ANY PERMITS NECESSARY FOR CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF THE LOCATION AND/OR RELOCATION OF ALL EXISTING UTILITIES WITH THE APPROPRIATE UTILITY, AGENCY OR COMPANY.
5. THE CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS AND DISTURBANCES WITH EXISTING USES AND WINSTON SALEM SO THAT ANY SERVICE INTERRUPTIONS ARE MINIMAL.
6. ALL WATERLINE JOINTS/CONNECTIONS SHALL BE RESTRAINED W/ MECHANICAL JOINT ETITINGS AND THRUST BLOCKS.
7. ALL GRAVITY SEWER SHALL BE 12° DUCTILE IRON PIPE UNLESS NOTED OTHERWISE ON PLANS.
8. ALL WATERLINE SHALL BE 12° DUCTILE IRON PIPE UNLESS NOTED OTHERWISE ON THE PLANS. ANY NON-FUNCTIONING VALVES ON EXISTING WATER LINES AT TIE-IN LOCATIONS SHALL BE REPLACED. CONST EASEMENT BORE PIT NSTALL THRUST COLLAR, CLOSE EXISTING EX GAS LINE G_{P_1} G_{T_1} G_{T_2} G_{T_3} G_{T_4} G_{T_4} G_{T_5} SHIELDS ROAD 12" DI 21+00 22+00 CONTRACTOR
SHALL-REPAIR DRIVEWAY
TO PREEXISTING CONDITION OR BETTER AREA_UNDER -- PROP GRADE PER "KERNERSVILLE RECREATION AND EVENT CENTER" PLAN SET BY CPL, SEAL DATE 07-18-2023. -1 - 12*x12*x6" REDUCING TEE

1 - 6" GATE VALVE

1 - FIRE HYDRANT

CONTRACTOR SHALL INSTALL WIT

MECHANICAL JOINT RESTRAINTS A

CONCRETE THRUST BLOCKING.

POSITION CENTER OF HYDRANT 1'

INSIDE PROPOSED ROW —1 - 12"x12"x6" REDUCING TEE

1 - 6" GATE VALVE

1 - FIRE HYDRANT
CONTRACTOR SHALL INSTALL WITH
MECHANICAL JOINT RESTRAINTS AN
CONCRETE THRUST BLOCKING.
POSITION CENTER OF HYDRANT 1'
INSIDE PROPOSED ROW **UTILITIES LEGEND:** EXIST / PROPOSED ¥ WATER VALVE FIRE HYDRANT WATER METER FIRE DEPT. CONNECTION (FDC) REDUCER PLUG & BLOCK MECHANICAL JOINT / BEND POST INDICATOR VALVE (PIV) AIR RELEASE VALVE (ARV) SANITARY SEWER MANHOLE SEWER CLEAN OUT CITY OF WINSTON-SALEM PERMIT NUMBER UTILITY DESIGN APPROVED CURB INLET DROP INLET JUNCTION BOX WATER 3389 GRAPHIC SCALE Denck Strond 8/29/2025 sewer 3389 FLARED END SECTION (FES) 25 50 (IN FEET) Date DATE 5/21/25 EXISTING WATER MAIN PROPOSED WATER MAIN / SERVICE Approval by the Utilities Director of the water and 1 inch = 50 f EXISTING GAS MAIN Approval of these water & sanitary sewer plans does not constitute approval for construction. Approval of construction must be in formal written agreement. Failure to obtain such agreement prior to beginning of construction will relieve the City of any financial participation in this project sewer infrastructure depicted in these plans does not PROPOSED GAS MAIN sewer imirastructure depicted in diese plans udoes not constitute approval for any other purpose than that set forth in Section 64 of the Water System Policy and Section 36 of the Sewer System Policy of the City/County Utility Commission. To the extent other permits, licenses, permissions or the like must be PROPOSED UNDERGROUND ELECTRIC ——ss———ss—— EXISTING SEWER MAIN PROPOSED SEWER MAIN / SERVICE obtained to complete this project, such are specifically SO EXISTING STORM PIPE not granted by this approval and must be obtained by the Developer and/or his designee. PROPOSED STORM PIPE Todd Lewis Know what's below. F0 F0 EXISTING FIBER OPTIC Call before you dig. EX 12" WATERLINE EX GRADE ALONG PROP WATERLINE ALIGNMENT EX 8" SANITARY SEWER 970.2

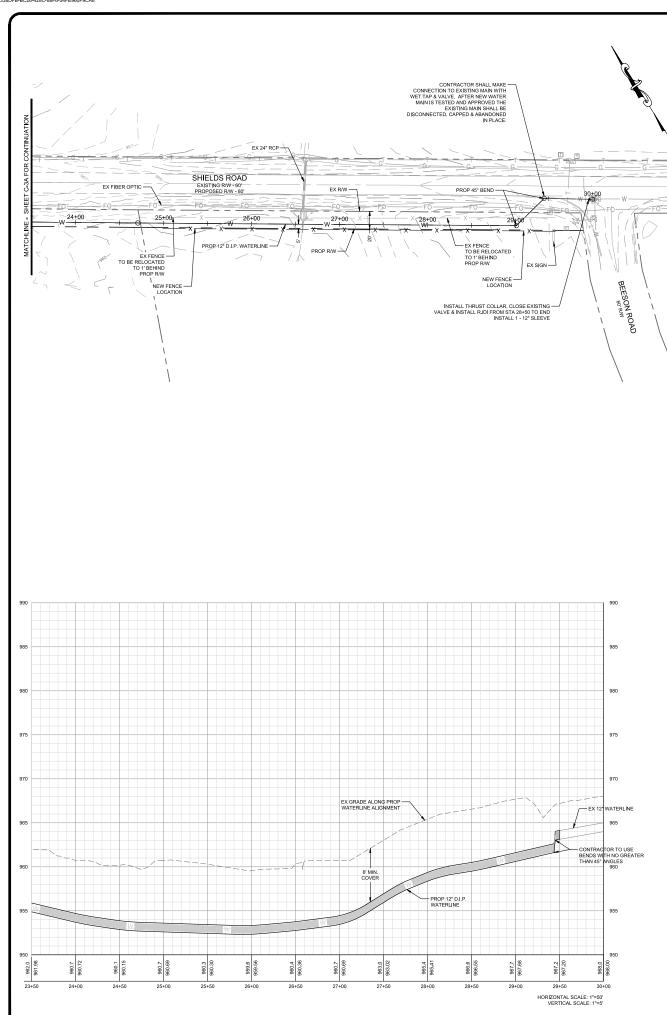
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CONSTRUCTION DRAWINGS
SHIELDS ROAD WATERLINE
SHELDS ROAD WATERLINE ROAD SHIELDS

23-0333 RAWING NAME 23-0333_S SHEET NO.

C-3A



SITE NOTES:

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF KERNERSVILLE AND WINSTON-SALEMFORSYTH COUNTY UTILITY STANDARDS AND SPECIFICATIONS.
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 5. AT COMPACTION SHALL COMPANY FOR ANY FOR SHALL PRICE FOR SEPANCEMENT, PAYING, SEEDING, LANDSCAPING, ETC.
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UTILITY NOTES:

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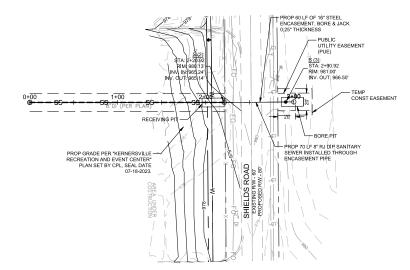
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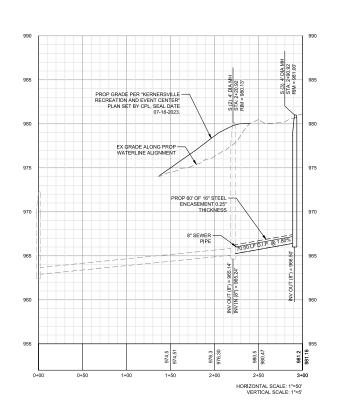
 IF CONFLICTS EXIST BETWEEN GRAVITY SANITARY OR STORMWATER PIPING THE CONTRACTOR SHALL INSTALL WATERLINE BENEATH WITH PROPER CLEARANCE (2"MINIMUM).
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 ANY NON-FUNCTIONING VALVES ON EXISTING WATER LINES AT TIE-IN LOCATIONS SHALL BE REPLACED

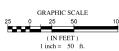






UTILITIES LEGEND: EXIST / PROPOSED





EXISTING STORM PIPE
PROPOSED STORM PIPE

— PROPOSED SEWER MAIN / SERVICE

EXISTING FIBER OPTIC



Know what's below. Call before you dig.

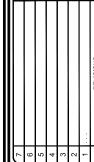
Approval of these water & sanitary sewer plans does not constitute approval for construction. Approval of construction must be in formal written agreement. Failure to obtain such agreement prior to beginning of construction will relieve the City of any financial participation in this project whatsoever.

> CITY OF WINSTON-SALEM Signed by:
> Todd Lewis

NOTE: CONTRACTOR TO POTHOLE EX UTILITIES TO VERIFY DEPTH PRIOR TO INSTALLATION OF SEWER.



Approval by the Utilities Director of the water and Approval by the Continues Director of the Water and sewer infrastructure depicted in these plans does not constitute approval for any other purpose than that set forth in Section 64 of the Water System Policy and Section 36 of the Sewer System Policy of the City/County Utility Commission. To the extent othe permits, licenses, permissions or the like must be obtained to complete this project, such are specifically not granted by this approval and must be obtained by the Developer and/or his designee.



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SUMMER STATES

CONSTRUCTION DRAWINGS
SHIELDS ROAD WATERLINE
RELOCATION
SHELDS ROAD SHIELDS ROAD WATERLINE & SANITARY SEWER EXTENSION

23-0333 RAWING NAME: 23-0333_S

SHEET NO. C-3B

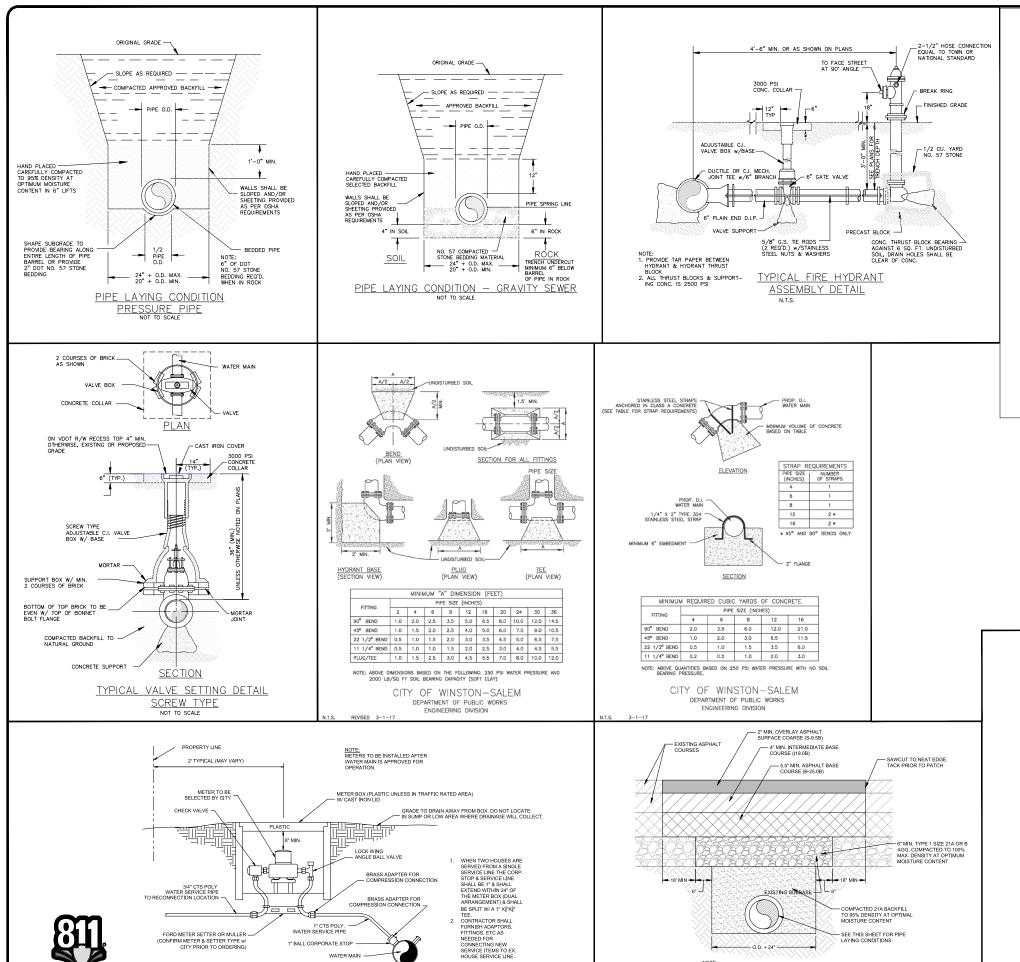
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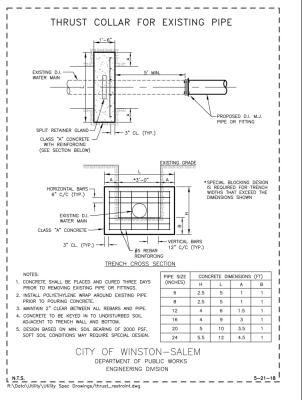
Call before you dig.

3/4" & 1" WATER

SERVICE DETAIL

S - 5





STANDARD MANHOLE FRAME AND COVER, UNLESS NOTED OTHERWISE ON PLANS

REINFORCED
CONCRETE GRADE
RINGS AS REQUIRED
FOR TOP ELEVATION - REINFORCED

12"-16" MAX.

_ 4'-0" I.D. _ UNLESS NOTED OTHERWISE

NOTE: MINIMUM REINFORCING SHALL BE 0.12 SQ. INCHES PER LINEAR FOOT IN EACH DIRECTION

STANDARD PRECAST MANHOLE

WITH MONOLITHIC BASE

2'-0". 3'-0". OR

3'-0" RISER SECTION

BASE SECTION

TOP ELEVATION AS SHOWN ON PLANS

COPOLYMER

GROUT BETWEEN MANHOLE FRAME & GRADE RINGS AS REQUIRED

COPOLYMER 5" MIN. POLYPROPYLENE PLASTIC COVERED MANHOLE STEP W/ 12" MIN. TREAD (PSI—PF MANHOLE STEP BY M.A. IND. INC. OR EQUAL)

SEAL ALL MANHOLE — JOINTS WITH BUTYL RUBBER ROPE SEALER, GROUT INSIDE AND OUT

1-1/2 : 12 SLOPE

INVERT ELEVATION AS SHOWN ON PLANS

NOTE: WHEN REPAIRING ASPHALT THE CONTRACTOR SHALL EITHER MATCH EXISTING AGGREGATE AND PAVEMENT THICKNESSES OR PLACE REPAIR MATERIALS IN ACCORDANCE WITH THE THICKNESSES IN THIS DETAIL, WHICHEVER IS GREATER.

ASPHALT REPAIR DETAIL

NOT TO SCALE



TIMES STATEMENT OF THE PROPERTY OF THE PROPERT

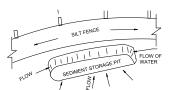
CONSTRUCTION DRAWINGS
SHIELDS ROAD WATERLINE
RELOCATION

DETAILS SEWER જ WATER

23-0333 RAWING NAME

23-0333_D SHEET NO.

D-1



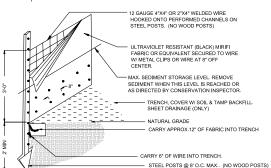
NOTES:

INOTES.

1) TOTAL DRAINAGE AREA FLOWING TO THE FENCE MAY NOT EXCEED 1 ACRE.

2) SILT FENCES SHOULD NOT BE USED AT PIPE OUTLETS OR IN AREAS OF CONCENTRATED FLOW (CREEKS, DITCHLINES, SWALES ETC.)

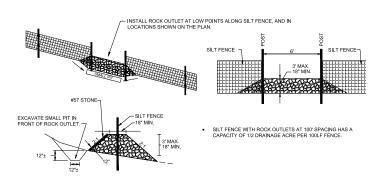
TO INCREASE STORAGE CAPACITY AND PROLONG THE LIFE OF THE SILT FENCE, IT IS GENERALLY ADVISABLE TO DIG A SEDIMENT PIT IN FRONT OF YOUR SILT FENCE WHENEVER POSSIBLE.



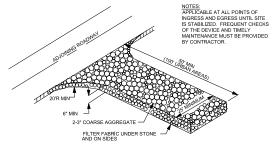
MAINTENANCE:

INSPECTS EDIDIENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL, MAKE ANY REQUIRED REPAIRS
IMMEDIATELY, SHOULD THE FABRIG OF A FENCE COLLAPSE, TEAR DECOMPOSE OR BECOME INEFFECTIVE, REPLACE
IF PROMPTLY, REPLACE BUILDE PEURY 80 DAYS, REMOVE SEDIMENT DEPOSITS AS INCESSARY TO PROVIDE
ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID
UNDERMINION THE FENCE DURING CLEANOUT. REMOVE ALL FENCENCING MATERILAS AND UNSTRABLE SEDIMENT
DEPOSITS AND BRING THE ARE TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN
PROPERLY STABILIZED.

TEMPORARY SILT FENCE



TEMPORARY SILT FENCE OUTLET



WASHED STONE PAD TO BE 50'L X 25'W X 6"TH MINIMUM (100'L MIN IN URBAN AREAS). IF THE ADJOINING ROADWAY IS WIDER THAN 25', THEN THE WASHED STONE SHALL BE AS WIDE AS THE ADJOINING ROADWAY.

TURNING RADIUS OF 20' MINIMUM TO ACCOMMODATE LARGE TRUCKS SHALL BE PROVIDED.

ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM USE BY ALL CONSTRUCTION VEHICLES. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO ADJACENT STREETS.

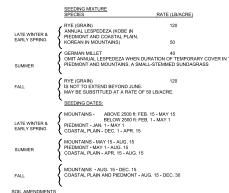
PERIODIC TOP DRESSING WITH STONE (2" THICK) WILL BE NECESSARY. ANY MATERIAL WHICH STILL MAKES IT ONTO THE ROAD MUST BE CLEANED UP IMMEDIATELY.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE / EXIT

NTS







SOIL AMENDMENTS
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS. IF SOILS TESTS NOT AVAILABLE APPLY LIME AT 2 TONS/AC FOR SANDING SOIL & 3 TONS/AC FOR CLAY SOIL AND 1,000 LB/ACRE 10-10-10 FERTILIZER

MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH

MAINTENANCE REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, FERTILIZE AND MULCH IMMEDIATELY EQUIDAMING EDOCKION OR OTHER DAMAGE.

PERMANENT SEEDING IN NORTH CAROLINA (TABLE 6.11L)

SEEDING MIXTURE	
SPECIES	RATE (LB/ACRE
TALL FESCUE	250
SERICEA LESPEDEZA	20
KOBE LESPEDEZA	10
	50

SECOND NOTES

1. AFTER AUGUST 15 USE UNSCAPIFED SERICEA SEED.

2. WHERE PERIODIC MOVING IS PLANNED OR A NEAR APPEARANCE IS DESIRED, OMIT SERICEA AND INCREASE KORE LESPEZED TO 40 LIBACRE.

3. TO EXTEND SPRING SEEDING DATES INTO JUINE, ADD 15 LIBACRE HULLED BERMUDAGRASS. HOWEVER, AFTER MID-APRIL 15 REPREFABLE TO SEED TEMPORARY COVER.

NURSE PLANTS
BETWEEN MAY 1 AND AUGUST 15, ADD 10 LBIACRE GERMAN MILLET OR 15 LBIACRE SUDANGRASS.
PRIOR TO MAY 1 OR AFTER AUGUST 15 ADD 40 LBIACRE RYE (GRAIN).

SEEDING DATES		
OCCUMO DIVICO	BEST	POSSIBLE
FALL:	AUGUST 25 - SEPTEMBER 15	AUGUST 20 - OCTOBER 25
LATE WINTER:	FUBRUARY 15 - MARCH 21	FEBRUARY 1 - APRIL 15
	FESCUE AND LATE WINTER FOR LE L-SEEDED TALL FESCUE IS VERY E	SPEDEZAS. OVER SEEDING OF KOBE FFECTIVE.

SOIL AMENDMENTS
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS. IF SOILS TESTS NOT AVAILABLE APPLY LIME AT 2 TONS/AC FOR SANDING SOIL & 3 TONS/AC FOR CLAY SOIL AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

MULCH APPLY 4,000 LBIACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH, ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL.

MAINTENANCE
REFERTILIZE IN THE SECOND YEAR UNLESS GROWTH IS FULLY ADEQUATE. MAY BE MOWED ONCE OR
TWICE A YEAR, BUT MOWING IS NOT NECESSARY, RESEED, FERTILIZE AND MULCH DAMAGED AREAS
IMMEDIATELY.

SEEDING SCHEDULE CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE. IRP THE ENTIRE AREA TO 6 INCHES DEPTH. REMOVE ALL LOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE.

3) REMOVE ALL LOSE ROOK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SUPERACE
REASONABLY SMOOTH AND UNIFORM.
4) APPLY AGRICULTURAL LIME, FERTILLER, AND UNFORMLY AND MIX WITH SOIL (SEE BELOW).
5) CONTINUE TILLINGE UNITL A WELL-PULVERIZED, FIRM REASONABLY UNIFORM SEEDBED IS PREPARED A TO 6
PR

* APPLY:
AGRICULTURAL LIMESTONE - 2 TONS! ACRES (3 TONS! ACRE IN CLAY SOILS)
FERTILIZER - 1,000 lbs. / ACRE -10-10-10
SUPERPHOSPHATE - 500 lbs. / ACRE -20% ANALYSIS
MCH - 2 TONS! ACRE (500 lbs. BACRE - 60% TONS - 150 PES) - SMALL GRAIN STRAW
ANOTHER - ASPHALT EMULSION @ 300 GALS./ ACRE

SEEDBED PREPARATION

MAINTENANCE:
NEW SEEDLINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS
NEEDED. IF RILLS ANG GULLIES DEVELOP, THEY MUST BE FILLED, RE-SEEDED, AND MULCHED
AS SOON AS POSSIBLE, DIVERSIONS MAY BE NEEDED JUNTIL NEW PLANTS TAKE HOLD.
DAMAGE TO VEGETATION FROM INDEASE, INSECTS, TRAFFIC, ETC., CAN OCQUE AT ANY
TIME HERBIODES AND REQULAR MOMING INAY BE NEEDED TO CONTROL WEEDS, DUST AND
SPRAYS MAY BE NEEDED TO CONTROL INSECTS.
WEEK OR DAMAGED SPOTS MUST BE RELIMED, FERTILIZED, MULCHED, AND RESEEDED AS
PROMITINE AS POSSIBLE.





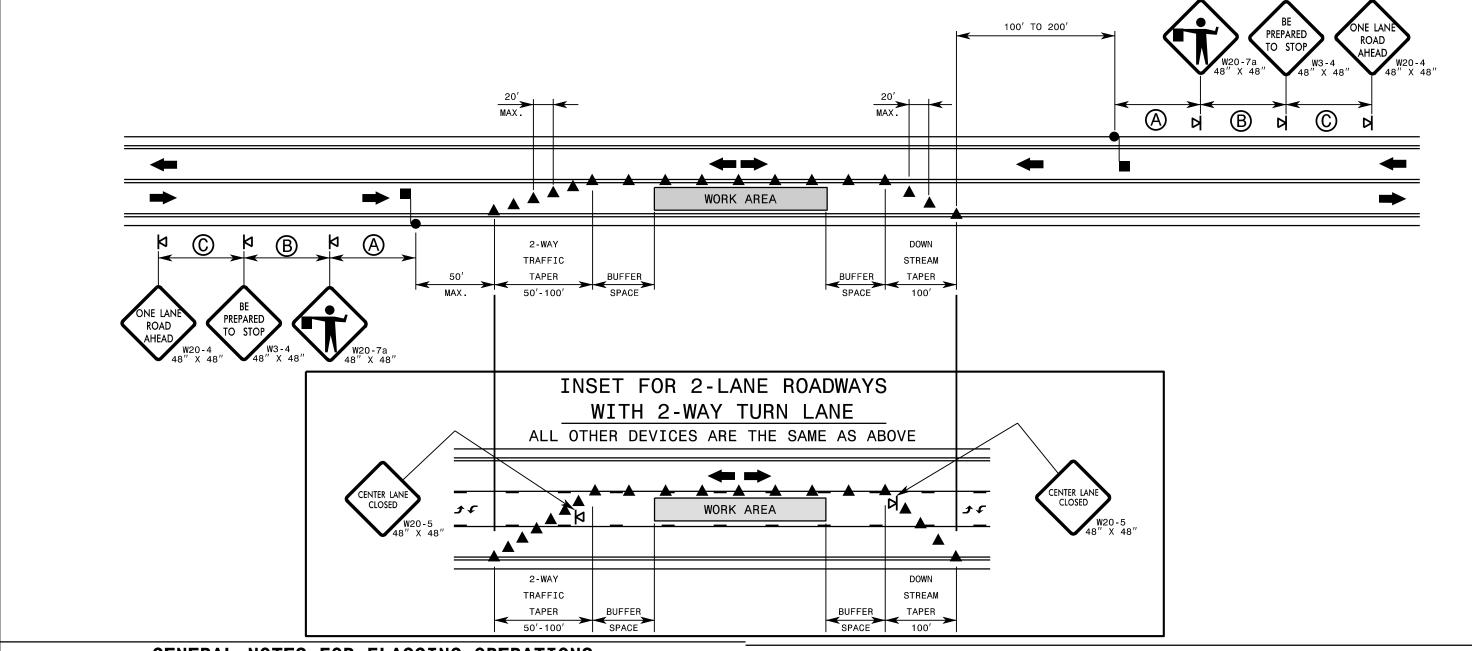
DETAILS CONTROL

CONSTRUCTION DRAWINGS
SHIELDS ROAD WATERLINE
RELOCATION
SHELDS ROAD EROSION જ SITE

23-0333 RAWING NAME

23-0333_D SHEET NO.

D-2



GENERAL NOTES FOR FLAGGING OPERATIONS

- 1- REFER TO RSD. 1101.11, SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
- 2- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC.
- 3- REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- 4- FOR POSTED SPEED LIMITS BELOW 45 MPH, CHANNELIZING DEVICE SPACING SHALL BE 20 FEET IN THE TAPERS AND THE SHIFTS AND 40 FEET IN THE TANGENTS. FOR POSTED SPEED LIMITS GREATER THAN OR EQUAL TO 45 MPH, CHANNELIZING DEVICE SPACING SHALL BE 40 FEET IN THE TAPERS AND THE SHIFTS AND 80 FEET IN THE TANGENTS.
- 5- EXTEND LANE CLOSURES AT THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE IS PROVIDED TO THE FLAGGER (REFER TO RSD. 1101.11, SHEET 2).
- 6- DO NOT STOP ALL DIRECTIONS OF TRAFFIC FOR MORE THAN 5 MINUTES AT A TIME.
- 7- DRUMS OR SKINNY DRUMS MAY BE USED IN LIEU OF CONES. REFER TO RSD. 1180.01 FOR SKINNY DRUM REQUIREMENTS.
- 8- USE FLAGGERS TO CONTROL TRAFFIC AT INTERSECTIONS AFFECTED BY THE LANE CLOSURE. SUPPLEMENT FLAGGERS LOCATED AT INTERSECTIONS WITH FLAGGER AHEAD SIGNS (W20-7A) PLACED APPROXIMATELY 250 FT. IN ADVANCE OF THE FLAGGER. FOR SIGNALIZED INTERSECTIONS PLACE SIGNALS IN THE FLASH MODE AND USE LAW ENFORCEMENT.
- 9- REFER TO THE CURRENT MUTCD FOR FLAGGER CONTROL, REQUIREMENTS, AND PROCEDURES.
- 10- DO NOT EXCEED A 1 MILE LANE CLOSURE LENGTH UNLESS OTHERWISE SHOWN IN THE TMP OR AS DIRECTED BY THE ENGINEER.

- 11- IF VEHICLE QUEUES WILL REACH WITHIN 100' OF EITHER SIDE OF ACTIVE RAILROAD TRACKS, PROVIDE A UNIFORMED LAW ENFORCEMENT OFFICER OR FLAGGER TO PREVENT VEHICLES FROM STOPPING WITHIN THE GRADE CROSSING. PROVIDE OFFICER OR FLAGGER EVEN IF AUTOMATIC WARNING MEASURES ALREADY EXIST.
- 12- THIS DETAIL IS APPLICABLE FOR OPERATIONS IN PLACE FOR 72 HOURS OR LESS. FOR LONGER DURATION OPERATIONS, SIGNING AND PAVEMENT MARKINGS MAY NEED TO BE ALTERED.

GENERAL NOTES FOR PILOT CAR OPERATIONS

- 1- USE PILOT CARS WHEN DIRECTED BY THE ENGINEER.
- 2- IF ROADWAY WIDTH IS LESS THAN 22 FEET (EOP TO EOP), CONES MAY NOT BE REQUIRED ALONG WORK AREA, AND AT THE DISCRETION OF THE ENGINEER, CONES MAY BE OMITTED ALONG THE WORK AREA IF USING A PILOT CAR.
- 3- CONES ARE ALWAYS REQUIRED IN THE UPSTREAM AND DOWNSTREAM TAPERS.
- 4- MOUNT SIGN G20-4 "PILOT CAR FOLLOW ME" AT A CONSPICUOUS POSITION ON THE REAR OF THE PILOT VEHICLE.
- 5- UNLESS APPROVED BY THE ENGINEER, DO NOT INSTALL MORE THAN ONE (1) MILE OF LANE CLOSURE, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- 6- ADVISE RESIDENTS AND BUSINESSES WITHIN THE LANE CLOSURE LIMITS ABOUT METHODS OF SAFE EGRESS AND INGRESS FROM DRIVEWAYS DURING FLAGGING AND PILOT CAR OPERATIONS.

LEGEND

FLAGGER

CONE

PORTABLE SIGN

DIRECTION OF TRAFFIC FLOW

Sheet Number

8

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FOR

DRAWING

STANDARD

ROADWAY

AN

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ROADWAY

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TMP-1