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CONTRACT AND SPECIFICATIONS

**TOWN OF RIVERHEAD
RIVERHEAD SEWER DISTRICT
SUFFOLK COUNTY, NEW YORK**

REBID FOR 203 213 EAST MAIN STREET SEWER IMPROVEMENTS

CONTRACT S – SEWERS

Project No: RDSD 2403

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NOTICE TO BIDDERS

The Town Board of Riverhead will receive bids for the following contract:

REBID FOR 203 213 EAST MAIN STREET SEWER DESIGN

CONTRACT S - SEWERS

H2M PROJECT NO.: RDSD 2403

for the Riverhead Sewer District at the Town Clerk's office, Town Hall, 4 West 2nd Street, Riverhead, New York 11901, at 11:00 AM prevailing time, on **Thursday, May 8, 2025**, at which time and place the bids will be publicly opened and read.

Plans and specifications may be examined on, or after, **Thursday, April 24, 2025** by visiting the Town of Riverhead website: townofriverheadny.gov and click on "Bid Requests".

All bid documents are to be obtained from the Town of Riverhead Website. Separate registration of bid documents holder under the "Notifications" section of the Town of Riverhead website is required in order to receive updates or notices regarding this project, which will only be distributed via the website.

Each proposal must be accompanied by a bid bond in the amount of five percent (5%) of the total bid, or a certified check made payable to the TOWN OF RIVERHEAD as assurance that the bid is made in good faith.

The right is reserved to reject any or all bids, to waive any informalities, and to accept the lowest responsible bid.

BY ORDER OF THE TOWN BOARD
TOWN OF RIVERHEAD
SUFFOLK COUNTY, NEW YORK

ACTING AS THE GOVERNING BODY
OF THE RIVERHEAD SEWER DISTRICT

JAMES M. WOOTEN, TOWN CLERK

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INSTRUCTIONS TO BIDDERS

1. RECEIPT AND OPENING OF BIDS

Pursuant to Town Board Resolution, the Town of Riverhead invites bids on the forms herein provided for the REBID FOR DEFRIEST PUMP STATION CONTROL PANEL REPLACEMENT, CONTRACT S – SEWERS CONTRACT No. RDSD 2403; 4 West 2nd Street, Riverhead, New York 11901, time, date and place indicated in the Notice to Bidders.

2. PLAN DEPOSITS

Plan deposits are not required. No hard copies of the bid plans will be issued. All bid documents shall be obtained from the Town of Riverhead website in electronic PDF format.

3. PLANS AND SPECIFICATIONS

Complete sets of Plans and Specifications for the inspection of prospective bidders will be found on file with the Town Clerk, Town of Riverhead, Town Hall, 4 West 2nd Street, Riverhead, New York 11901, and at the office of H2M architects + engineers, 538 Broad Hollow Road, 4th Floor East, Melville, New York.

All contractors must input their names, telephone numbers, fax numbers, and correct mailing addresses to access of the Plans and Specifications from the Town website.

4. VERBAL ANSWERS

The Town Board, its agents, servants or employees, or the Engineer, will not be responsible in any manner for verbal answers to any inquiries regarding the meaning of the Contract Drawings or Specifications given prior to the awarding of the contract.

5. EXAMINATION OF SITE

Bidders must satisfy themselves by personal examination of the location of the proposed work and of the actual conditions and requirements of the work and shall not, at any time after the submission of a proposal, dispute or complain of such estimate or assert that there was any misunderstanding in regard to the depth and character of excavation and extent of dewatering to be made or the nature of the work to be done.

Dewatering to be provided by the property owner and contractor shall coordinate work with property owner's dewatering operations.

6. FORM, PREPARATION AND PRESENTATION OF PROPOSAL

In submitting the bid, the bid sheets furnished are to be filled in but not detached from the Contract Form. In no case is the Contract Form to be filled in or signed by the bidder. All proposals and either the certified check or bid bond must be placed in a sealed opaque envelope bearing the Bidder's firm name and address and separately marked for each contract a bid is submitted for:

"BID FOR 203 213 EAST MAIN STREET SEWER IMPROVEMENTS"

but otherwise unmarked. All blank spaces for bid prices must be filled in, in ink, in both words and figures, with the total or gross sum for which the bid is made. Bids that contain any omission, erasure, alteration, addition or items not called for in the itemized bid form or that contract

INSTRUCTIONS TO BIDDERS

irregularities of any kind may be rejected. In case of discrepancy between the unit price and total amount bid for any item, the unit price, as expressed in words, shall govern.

The Proposal contained herein shall be used in making out bids. Any proposal not in accordance with these instructions or containing bids not asked for may be rejected. While separate prices are required for various items under this contract, it is understood that the contract will be awarded as a whole.

As the estimates of quantities of items stated in the Proposal are approximate only, bidders are required to submit their proposal upon and in the following express conditions, which shall apply and become part of every proposal received.

Bids will be compared by total amounts; said total amount being the sum of the products of the quantities multiplied by the unit prices bid for the various unit price items, with due consideration being given to the lump sum prices bid and stipulated amounts for any contingent or optional items. Unbalanced bids will not be accepted.

Each bidder shall fill out in ink, in both words and figures, in the spaces provided, its unit or lump sum bid, as the case may be, for each item in said Proposal for which it is submitting a bid. If there is any discrepancy between the prices in words and figures, the prices in words shall govern as unit and lump sum prices.

A bid may not be considered valid which does not include bids for all items in the Proposal.

Each bidder must state, in its proposal, its full name and business address, and the full name of every person, firm or corporation, interested in same, and the address of every person or firm, or president and secretary of every corporation, interested with it.

If the contract is not awarded by the Town Board within ninety (90) days after the receipt of bids, the obligation of the bidder under this Proposal may terminate at its option and it shall thereupon be entitled to a refund of its certified check or release of its bid bond furnished by it as security with its proposal.

7. BID SECURITY

- (A) The bid must be accompanied by a certified check on the solvent bank or trust company with its principal place of business in New York State, or an acceptable bid bond, in an amount equal to not less than five percent (5%) of the total bid, made payable to the Town of Riverhead (herein identified as the Town), as assurance that the bid is made in good faith. The certified checks or bid bonds will be returned after execution of the contract between the Town and the successful bidder; the certified check or bid bond of the successful bidder will be retained until filing and approval of the Performance Bond and until the completion of ten percent (10%) of the work under the contract.
- (B) The successful bidder, upon his failure or refusal to execute and deliver the contract insurance and bonds required within fourteen (14) days after the date of notice of the acceptance of his bid, shall forfeit to the Town, as liquidated damages for such failure or refusal, the security deposited with his bid.
- (C) Each proposal must also be accompanied by a Letter of Intent from a surety company acceptable to the Town, which letter shall assure the Town that the bidder, if awarded the Contract, will be able to secure from the surety the required bonds in the required amounts.

INSTRUCTIONS TO BIDDERS

8. QUALIFICATIONS OF BIDDERS

- (A) Forms or qualifications of bidders, giving evidence of sufficient facilities, equipment, experience and financial ability to insure completion of the work will be provided, and the three lowest bidders shall be prepared to file at the option of the Town said form, properly filled in and sworn to in the Office of the Town Clerk within seven (7) days after the opening of bids.
- (B) Information contained in any statement of financial ability shall be not more than thirty (30) days old at the time of submission. If a financial statement is already on file with the Town Clerk, a new one need not be submitted provided the information contained therein is not more than thirty (30) days old at the time of the opening of bids and provided the contractor has not materially changed since submission of said statement.

9. REJECTION OF BIDS

- (A) The Town Board reserves the right to waive any informalities in, or reject any bid if the evidence submitted in the qualifications statement or an investigation of such bidder fails to satisfy the Town Board that such bidder is reputable, reliable and responsible, and that they possess the necessary qualifications (financial, labor, equipment and otherwise properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. The Board reserves the right to reject any and all bids which do not conform to the Proposal. Conditional bids will not be accepted.
- (B) The Town Board shall be the sole judge of the qualifications of the bidders and of the merits thereof and reserves the right to reject any bid if the record of the bidder in the performance of contracts, payment of bills and meeting of obligations to subcontractors, material men or employees is not satisfactory to the Town Board, or if the evidence submitted by, or the investigation of, such bidders fails to satisfy the Town Board that it is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.
- (C) The Town Board reserves the right to reject any and all bids, in whole or in part, to waive any information in any or all bids, and to accept the bid or part thereof which it deems most favorable to the Town after all bids have been examined and/or checked. No bid shall be withdrawn for a period of forty-five (45) days after being publicly opened and read.
- (D) The Town Board reserves the right to reject any bids, in whole by a low bidder in which the owner of the low bidder has violated Prevailing Wage and Supplemental Payment Requirements of the Labor Law, and any other labor provisions, including but not limited to child labor violations, failure to pay wages, or unemployment insurance tax delinquencies within the past five (5) years. An owner is defined in this paragraph as an individual who owns more than 50% of a past or present company.

10. WITHDRAWAL OF BID

- (A) Any bid may be withdrawn prior to the Bid Opening Date and Time specified above or authorized postponement.
- (B) Bids may not be withdrawn before forty-five (45) days after the Bid Opening Date and Time, unless a clerical mistake or error is claimed by the Bidder.

INSTRUCTIONS TO BIDDERS

- (C) If a Bidder claims to have made a clerical mistake or error in his Bid, he shall notify the Owner within the time limitations set forth in General Municipal Law Section 103 (11) (a) together with all documentary evidence in support of the Bidder's claim of a bid mistake or error.

11. BIDDER'S RESPONSIBILITY

- (A) The Bidder shall include the complete cost of furnishing all materials, labor and equipment necessary to complete the work in accordance with the plans and specifications, including all other expenses incidental thereto.
- (B) Bidders must examine the plans and specifications and exercise their own judgment as to the nature and amount of the whole of the work to be done, and for the bid prices, must assume all risks of variance by whomever made in computation or statement of amounts or quantities necessary to fully complete the work in strict compliance with the contract documents.
- (C) The contractor shall assume all risks and responsibility and shall complete the work in whatever material and under whatever conditions he may encounter or create, without extra cost to the Town.
- (D) Attention is hereby particularly directed to the provisions of the contract whereby the Contractor will be responsible for any loss or damage that may happen to the work or any part thereof during its progress; and also whereby the Contractor shall make good any defects or faults that may occur during the progress of the work or within twelve (12) months after date of the Engineer's approval of the final payment request.
- (E) No plea of ignorance or misunderstanding of conditions that exist or that may hereafter exist, or of conditions or difficulties that may be encountered in the execution of the work under this contract, as a result of failure to make the necessary examinations and investigations, will be to fulfill in every detail all of the requirements of the contract documents, or will be accepted as a basis for any claims whatsoever for extra compensation or for extension of time.

12. SIGNATURE OF CONTRACTOR

The bidder to whom a contract may be awarded shall appear at the office of the Town Board, with the surety documents offered by it, within seven (7) days, Saturdays and Sundays excepted, after date of notification of the acceptance of its proposal, and there sign the contract in quadripartite for the work and furnish approved security for its performance.

In case of failure to do so, the bidder shall be considered as having abandoned the same, and the check accompanying its proposal shall be forfeited to the Town Board, or the penalty of the bid bond shall be invoked.

13. CONSTRUCTION TERMS AND CONDITIONS

The successful bidder is warned that the work specified in the Conditions of Contract, together with the Information to Bidders, Form of Bid, Plans and Specifications and Instruction of the Town Engineer, or his duly authorized representative, will be strictly enforced.

14. SECURITY FOR FAITHFUL PERFORMANCE AND MAINTENANCE

INSTRUCTIONS TO BIDDERS

The successful bidder shall be required to furnish at the execution of the contract an executed bond of a surety company authorized to do business in the State of New York and approved by the Town Board, in an amount equal to 100% of the total amount of the contract, guaranteeing to the Board the faithful performance of the contract and payment of all claims for materials, labor and wages in connection therewith. Prior to the release of the Performance Bond, the Contractor shall deliver to the Town a Maintenance Bond equal to 100% of the total contract price, including all extras which shall remain in effect for a period of one (1) year from the date of the Engineer's approval of the final payment request as a Guarantee Bond.

15. FOREIGN CONTRACTORS

Foreign contractors must comply with the provisions of Articles 9A and 16 of the Tax Law, as amended, prior to submission of a bid for the performance of this work. The certificate of the New York State Tax Commission to the effect that all taxes have been paid by the foreign contractor shall be conclusive proof of the payment of taxes. The term "foreign contractor" as used in this subdivision means in the case of an individual, a person who is a legal resident of another state or foreign country; and in the case of a foreign corporation, one organized under the laws of a state other than the State of New York.

16. LIEN LAW

Attention of all persons submitting bids is specifically called to the provisions of Section 25, Subdivision 5, Section 25A and 25B of the Lien Law, as amended, in relation to funds being received by a contractor for a public improvement declared to constitute trust funds in the hands of such contractor to be applied first to the payment of certain claims. Pursuant to Section 220-a of the Labor Law all contractors and subcontractors and subcontractors to subcontractors shall file an affidavit attesting to the payment to employees.

17. SUBCONTRACTORS AND SUPPLIERS

Within five days after receipt from the Town Engineer, or his representative, of notice to begin work, the contractor will furnish written notice of names of all subcontractors to be employed on the project and the general items of work to be done by them. Simultaneously, the contractor shall furnish written notice of the names and suppliers of materials to be used on the project. The town may disapprove, for good cause, any subcontractor or material supplier selected by the contractor by giving written notice of its disapproval within five (5) days after receiving the names of subcontractors and material suppliers, to the contractor who shall thereupon promptly notify the town of the names of the subcontractor or material supplier selected in replacement which shall again be subject to approval by the town.

18. PENAL LAW

Attention is called to Section 1918 of the Penal Law as follows:

Construction or blasting near pipe conveying combustible gas

No person shall discharge explosives in the ground, nor shall any person other than a state or county employee regularly engaged in the maintenance and repair thereof excavate in any then existing street, highway, or public place, unless notice thereof in writing shall have been given at least seventy-two (72) hours in advance to the person, corporation or municipality engaged in the distribution of gas in such territory. The person having direction or control of such work shall give such notice, and further he shall ascertain whether there is within one hundred (100) feet in such

INSTRUCTIONS TO BIDDERS

street, highway or public place, or in the case of a proposed discharge of explosives within a radius of two hundred (200) feet of such discharge, any pipe of any other person, corporation or municipality conveying combustible gas, and if thereby any such pipe, he shall also give such notice to any other such person, corporation or municipality. Provided, however, that in any emergency involving danger to life, health, or property it shall be lawful to excavate without using explosives if the notices prescribed herein are given as soon as reasonably possible, and to discharge explosives to protect a person or persons from an immediate and substantial danger of death or serious personal injury if such notices are given before any such discharge is undertaken. Any such work shall be performed in such manner as to avoid danger to any pipe conveying combustible gas. Any violation of the provisions of this section shall be a misdemeanor.

19. REFUSAL TO WAIVE IMMUNITY

Pursuant to the provisions of Section 103-A of the General Municipal Law, in the event that the bidder or any members, partner, director or officer of the bidder, should refuse when called before a grand jury to testify concerning any transaction or contract had with the State, any political subdivision thereof, a public authority or with any public department, agency or official of the State, of any political subdivision thereof or of an authority, to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant questions concerning such transaction or contract, such person, and any firm, partnership or corporation of which he is a member, partner, firm director or officer shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any contracts with any municipal corporation or any public department, agency, or official thereof, for goods, work or services, for a period of five (5) years after such refusal, and any and all contracts made with any municipal corporation or any public department, agency or official thereof on or after the first day of July, 1959, by, such person and any firm, partnership or corporation of which he is a member, partner, director or officer may be canceled or terminated by the municipal corporation without incurring any penalty or damages on account of such cancellation or termination, but any monies owing by the municipal corporation for goods delivered or work done prior to the cancellation or termination shall be paid.

20. ADDENDA AND INTERPRETATIONS

Every request for information or interpretation of the Contract Documents or Drawings must be addressed via email to James Vierling, P.E., Sr. Project Engineer of Wastewater Engineering, jvierling@h2m.com, and to be given any consideration, must be received at least five (5) days prior to the date fixed for the opening of bids. Request for information or interpretation of the Contract Documents or Drawings will only be evaluated and considered if made by registered plan holders as recorded on the Town's website. Any such interpretations or supplemental instructions will be in the form of written addenda, and will be posted on the Town's website for access by all prospective bidders/registered plan holders. The failure of any bidder to receive any such addenda will not relieve the bidders of any obligations under his bid as submitted. Any addenda so issued shall become part of the Contract Documents.

21. LIQUIDATED DAMAGES

Liquidated damages in the amount of One Thousand Dollars and Zero Cents (\$1,000.00) will be assessed for each consecutive calendar day of total contract work delay not excusable as provided in the Contract Documents.

In the event that the Contractor fails to commence work that requires dewatering on the scheduled start date or fails to continue work every working day thereafter, the Contractor shall

INSTRUCTIONS TO BIDDERS

be liable to pay the Owner liquidated damages in the amount of \$2,000 per day for each day of delay until the work that requires dewatering is completed, unless the non-working contract day is agreed to by the Owner. This amount is agreed upon as a reasonable estimate of the damages that the Owner will incur due to such delay, and is not intended as a penalty.

If, after the dewatering by others is initiated and the Contractor commences work that requires dewatering, and the dewatering operations are not available, working, or suitable to facilitate the work, the Contractor shall receive \$2,000 per day for each working day that the work has already started and the Contractor is required to halt the work while waiting for proper dewatering by others to be provided. The delay payment to be received by the contractor includes days that are deemed by the Town to include contract rework, or cleaning, labor and materials to contract work installed to date that are impacted by the dewatering by others operation failure.

22. EXEMPTION FROM SALES AND USE TAXES

In accordance with Chapter 513 of the laws of 1974 adopted by the New York State Legislature, amending Section 1115(a) of the tax law, specifically paragraphs 15 and 16, political subdivisions, as described in subdivision (a) paragraph (L) of Section 1116 of the tax laws, of the State of New York are exempt from the payment of sales and use taxes imposed on tangible personal property within the limitations specified in tax law 115 (a) (15) and (16).

- (15) Tangible personal property sold to a contractor, subcontractor or repairman for use in erecting structure or building of an organization described in subdivision (a) of Section 116, or adding to, altering or improving real property, property or land of such an organization, as the terms real property, property and land are defined in the real property tax law; provided, however, no exemption shall exist under this paragraph unless such tangible personal property is to become an integral component part of such structure, building or real property.
- (16) Tangible personal property sold to a contractor or repairman for use in maintaining, servicing or repairing real property, or land of an organization described in subdivision (a) of Section 116, as the terms real property, property or land are defined in the real property tax law; provided, however, no exemption shall exist under this paragraph unless such tangible personal property is to become an integral component part of such structure, building or real property.

Contractors entering into contract with the Town of Riverhead shall be exempt from payment of sales and use tax described above. Procedures and forms are available to the contractor direct from the Instructions and Interpretations Unit, State of New York, Department of Taxation and Finance, State Campus, Albany, New York 12227.

23. METHOD OF AWARD

All bids will be compared based on the lowest bid price(s) submitted for the work to be done in addition to the qualifications of the bidder. Bidder may be requested to submit additional information such as references.

24. TIME FOR COMMENCEMENT OF WORK

The bidder, when submitting his bid, must be prepared to commence work not later than Twenty Eight (28) days after receiving a Notice to Proceed.

satisfactorily completed and the project improvements available for use within the completion time stipulated. For additional information see Conditions of Contract, Section 5, Time of Completion.

The Contractor shall commence work within six months of the Notice to Proceed, contingent upon the approval, installation, and operational status of the dewatering system provided by others. The Contractor shall plan for potential work start delays of up to six months from the Notice to Proceed to accommodate the completion of the dewatering permit and system installation by others. The Contractor shall coordinate the start of work with the property owner and initiate the work no later than one week after the dewatering system is installed, operational, and suitable to facilitate the work.

25. PAYMENT

Upon completion of the work under this contract, the contractor shall notify the Town Engineer of his completion. The Town Engineer will then make a final inspection and submit to the contractor a "punch list" if required. Upon final acceptance of the work by the Town Engineer, the contractor shall be paid one lump sum payment equal to the amount bid herein minus previous payments and plus or minus other contract approved charge orders. Contractor shall submit a Receipt on company letterhead in the amount billed, a signed Town of Riverhead Voucher, Certified Payroll Records, Wage Disclaimer and the No Lien Affidavit attesting to the payment of employees. Payment shall not be processed until all necessary paperwork is received.

26. NYS LABOR LAW

The contractor and each and every subcontractor performing work at the site of the project to which this contract relates shall comply with the applicable provisions of the Labor Law, as amended, of the State of New York.

Effective December 30, 2024, there has been an update to Article 8 of the New York State (NYS) Labor Law, specifically section 220-i, which affects contractors and subcontractors working on public works projects and private projects covered under Article 8 of the NYS Labor Law. This law introduces new registration requirements for contractors and subcontractors working on these specified projects.

Pursuant to NYS Labor Law section 220-I, a contractor or subcontractor working on a project or work order covered under Article 8 must register on-line with the NYS Commissioner of Labor. Information and registration instructions can be found at <https://dol.ny.gov/contractor-and-subcontractor-landing>

Contractors must register prior to submitting any new bids or commencing new work on a covered project or work order on or after December 30, 2024. Subcontractors must register prior to commencing new work on a covered project on or after December 30, 2024. Please note that failure to register and submit the registration certificate with any new bids after December 30, 2024 will result in immediate disqualification of the bid.

27. NYS WAGE RATES

The rates of wages determined by the New York State Industrial Commissioner pursuant to the Labor Law, which are to be paid on this project, are set forth herein immediately following:

PREVAILING WAGE RATES

CURRENT PREVAILING WAGE RATES SCHEDULE PRESENTED ON THE PAGES DIRECTLY FOLLOWING THIS INSTRUCTION TO BIDDERS SECTION

28. FEDERAL LABOR LAW

If this project is being assisted by funding from the Federal Government of the United States of America under one or more current federal funding programs, and as such, the performance of all work contemplated under the terms and conditions of this set of plans, specifications and related documents must conform to certain basic and specific standards and requirements of both Federal and New York State governments.

INSTRUCTIONS TO BIDDERS

29. FEDERAL WAGE RATES

The rates of wages determined by the Federal Government of the United State of America pursuant to the Labor Law, which are to be paid on this project, are set forth herein immediately following:

30. INSURANCE REQUIRED BY THE TOWN OF RIVERHEAD

The Contractor shall not commence any work until it has obtained and had approved by the Town all of the insurance specified and required by the Contract.

The successful bidder will be required to procure and pay for the following types of insurance, in accordance with the provisions of the Conditions of Contract:

- (A) Workers' Compensation Insurance.
- (B) Public Liability and Property Damage.
- (C) Contractor's Liability and Contractor's Property Damage.
- (D) Owner's Protective Public Liability and Property Damage.

Insurance documents meeting the requirements of Conditions of Contract, Section 38, Contractor's Insurance, shall be submitted within 14 calendar days from the date of award. Failure to provide acceptable insurance certificate(s) within this time frame shall result in the termination of Primary Contractor status.

The Contractor shall not permit any subcontractor to commence any operation on the site until satisfactory proof of carriage of the above required insurance has been posted with, and approved by, the Town Board.

31. TERM OF CONTRACT

The term of this contract shall be until the completion date set by the Notice to Proceed and the length of contract time (calendar days) as stipulated in the Proposal Form. The Town of Riverhead shall have the option of extending this contract upon good cause shown by the Contractor.

32. CERTIFIED PAYROLL RECORDS

State of New York Department of Labor

On September 10, 1997, Governor Pataki signed into law Assembly Bill 6394-B amending Article 8, Section 220, of the NYS labor Law to include the following language:

Every contractor and sub-contractor shall submit to the department of jurisdiction within thirty (30) days after issuance of its first payroll, and every thirty (30) days thereafter, a transcript of the original payroll record, as provided by this article, subscribed and affirmed as true under penalties of perjury. The DEPARTMENT OF JURISDICTION shall be required to receive and maintain such payroll records.

The original payrolls or transcripts shall be preserved for three years from the completion of the work on the awarded project.

This law took effect on November 9, 1997.

Form WH-347 Inst. is included in this package for contractor's convenience and must be completed, for the current payment request period, including all payroll information for all

INSTRUCTIONS TO BIDDERS

employees and subcontractor employees including but not limited to laborers, mechanics, foremen, supervisors, etc.

INSTRUCTIONS TO BIDDERS

PERSONAL PERFORMANCE FORM
STATEMENT TO BE SUBMITTED
WHEN WORK IS PERFORMED PERSONALLY
(SECTION 10001, TITLE 18, US CODE)

I, _____, hereby certify that I am the
_____ of _____
Title Name of Firm Submitting Statement

_____ for _____
Prime Contractor or Subcontractor Nature of Work

at _____, located in _____
Name of Building work being done City and State

under contract number _____
Government Contract No. (See No. 3 Below)

that _____
State All Work or List the Specific Classes of Work

was done personally by _____
Names of Person(s) Performing Work & Their Connection
w/ Firm

that no wages were received for the labor performed; that no mechanics or laborers were
employed in the prosecution thereof; and that the work was done during the following periods: ____
_____ to _____
Beginning Date Ending Date

Last date on which work was performed at the site was _____.

Signature

Title

Section 100001 of Title 18 of the United State Code (Criminal Code and Criminal Procedures)
shall apply to such statements – 72 Stat 887, 18 U.S.C., among other things, provides that
whoever knowingly and willfully makes or uses a document or writing containing any false,
fictitious or fraudulent statement or entry, in any matter within the jurisdiction of any department or
agency of the United State, shall be fined not more than \$10,000 or imprisoned not more than five
years, or both).

Instructions for Submission of Statements of Work Performed Personally

- 1. Prime contractors or subcontractors who perform the work are required to submit in lieu of weekly statements of compliance and payrolls with respect to the payment of wages pursuant to the Copeland Anti-kickbacks regulations, a certified statement clearly showing (1) their contractual relationship,; (2) the scope and dates of work performed (3) that they received no wages; and (4) that no mechanics or laborers were employed in the prosecution of the work. The aforementioned sample form sets forth the wording described for such certified statements.**
- 2. Prime contractors are responsible for the submission of the certified statements of subcontractors. Subcontractors' statement should be forwarded to the prime contractor for transmission to the Government contracting officer or his designated representative.**
Statements of prime contractors and subcontractors should be submitted as soon as possible after the last date on which work was performed at the site.
- 3. To facilitate identification of the project involved, prime contractors should provide their subcontractors with the Government contract number (if exists) or project name as called for on statement form.**
- 4. Prime contractors should furnish their subcontractors with copies of the sample statement form so as to facilitate submission of the necessary information.**

INSTRUCTIONS TO BIDDERS

33. NO LIEN AFFIDAVIT & WAGE DISCLAIMER

State of New York Department of Labor

Pursuant to Section 220-a of the New York State Labor Law all contractors, subcontractors and subcontractors to subcontractors must file an affidavit pertaining to the payment of all laborers and mechanics, exclusive of supervisory employees.

Affidavit Form 220 and Town of Riverhead Wage Disclaimer Form is included in this package for contractor's convenience. Unless given at later date, leave project number blank.

NOTE: Bidders are advised that this is not a contract authorizing any work. It is the option of the Town to authorize work at any time of the year. Any Town department or agency can use this contract.

INSTRUCTIONS TO BIDDERS

MUNICIPAL CORPORATION

TOWN OF RIVERHEAD
4 WEST 2nd STREET
RIVERHEAD, NY 11901

CONTRACT NAME: _____ PROJECT No.: _____

AFFIDAVIT

Pursuant to Section 220-a of the Labor Law and Town of Riverhead Requirements
Note: All contractors, subcontractors, and subcontractors of subcontractors must file this statement for each payment period requested.

I, _____, _____
Name Title

of _____ Contractor
Name of Firm Subcontractor

Project No.: _____ With: _____
Contractor Name

for _____
Indicate Nature of Work

at _____ hereby certify that all laborers have been paid in full for
period ended _____, 20 _____. and that there is now due and owing from
it/me to any and all laborers (laborers include all laborers, mechanics, foremen and supervisory
employees) for daily or weekly wages or supplements on account of labor performed upon the
work under said contract, the following amounts to the persons whose names are set forth below
opposite such amounts. (If none, so state.)

\$ _____ due and owing to _____
\$ _____ due and owing to _____
\$ _____ due and owing to _____
\$ _____ due and owing to _____

Use additional sheet if necessary.

I further certify that I have contracted with the firms listed below as subcontractors, for labor to be
performed upon the work under said contract for the current pay period requested. (If none, so
state.)

Names and Address of Subcontractors	Type of Work
_____	_____
_____	_____
_____	_____

Use additional sheet if necessary

Signature

INSTRUCTIONS TO BIDDERS

STATE OF NEW YORK

SS:

COUNTY OF: _____

On this _____ day of _____ 20____, personally appeared before me _____
to me known and known to me who being by me duly sworn said that he is _____
(Officer)

of _____ the _____
(Contractor or Subcontractor) (Corporation or Partnership)

for which he executed the foregoing statement, for and in behalf of the said _____
contractor; that he has read the said statement so signed by him and known to be the seal
thereof and that the same is true and to his own knowledge.

Notary Public

Dated: _____

Section 220-c Labor Law. Any Contractor or subcontractor who shall upon his oath verify any statement required to be filed under this act which is known by him to be false, shall be guilty of perjury and punishable as provided by Section One Thousand Six Hundred and Thirty Three of the Penal Law.

INSTRUCTIONS TO BIDDERS

TOWN OF RIVERHEAD WAGE DISCLAIMER

Note: All contractors, subcontractors, and subcontractor of subcontractors must file this statement for each payment period request.

DATE: _____

TO: TOWN OF RIVERHEAD

FROM: _____
(Contractor)

PROJECT: _____

To our knowledge, the laborers listed on the attached certified payrolls have been paid the prevailing wage rates as established by the Department of Labor.

Signature

Title

Date

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Payrolls and Payroll Records

Contractors and subcontractors are required to establish, maintain, and preserve for not less than six (6) years, contemporaneous, true, and accurate payroll records.

Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury.

Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. Although in most cases the payment or provision of supplements is straight time for all hours worked, some classifications require the payment or provision of supplements, or a portion of the supplements, to be paid or provided at a premium rate for premium hours worked. Supplements may also be required to be paid or provided on paid holidays, regardless of whether the day is worked. The Overtime Codes and Notes listed on the particular wage classification will indicate these conditions as required.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.ny.gov) for current wage rate information.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1:1,1:4
Boilermaker (Shop)	1:1,1:3
Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1:1,1:4
Carpenter (Residential)	1:1,1:3
Electrical (Outside) Lineman	1:1,1:2
Electrician (Inside)	1:1,1:3
Elevator/Escalator Construction & Modernizer	1:1,1:2
Glazier	1:1,1:3
Insulation & Asbestos Worker	1:1,1:3
Iron Worker	1:1,1:4
Laborer	1:1,1:3
Mason	1:1,1:4
Millwright	1:1,1:4
Op Engineer	1:1,1:5
Painter	1:1,1:3
Plumber & Steamfitter	1:1,1:3
Roofer	1:1,1:2
Sheet Metal Worker	1:1,1:3
Sprinkler Fitter	1:1,1:2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor
Bureau of Public Work
State Office Campus, Bldg. 12
Albany, NY 12226

District Office Locations:	Telephone #	FAX #
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-932-2419	212-775-3579
Bureau of Public Work - Patchogue	631-687-4882	631-687-4902
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work - Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

Suffolk County General Construction

Asbestos Worker

04/01/2025

JOB DESCRIPTION Asbestos Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Asbestos Worker \$ 47.25
Removal & Abatement Only*

NOTE: *On Mechanical Systems that are NOT to be SCRAPPED.

SUPPLEMENTAL BENEFITS

Per Hour:

Asbestos Worker \$ 13.65
Removal & Abatement Only

OVERTIME PAY

See (B, B2, *E, J) on OVERTIME PAGE

*Hours worked on Saturdays are paid at time and one half only if forty hours have been worked during the week.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8) on HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentice Removal & Abatement Only:

1000 hour terms at the following percentage of Journeyman's rates.

1st	2nd	3rd	4th
78%	80%	83%	89%

SUPPLEMENTAL BENEFIT

Per Hour:

Apprentice
Removal & Abatement \$ 13.65

4-12a - Removal Only

Boilermaker

04/01/2025

JOB DESCRIPTION Boilermaker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2024 01/01/2025

Boilermaker \$ 67.38 \$ 68.88

Repairs & Renovations 67.38 68.88

Repairs & Renovation: Includes Repairing, Renovating replacement of parts to an existing unit(s).

SUPPLEMENTAL BENEFITS

Per Hour:

Boilermaker	33.5% of hourly	33.5% of Hourly
Repair & Renovations	Wage Paid	Wage Paid
	+ \$ 26.85	+ \$26.85

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

Repairs & Renovation Includes replacement of parts and repairs & renovation of existing unit.

OVERTIME PAY

See (*B, O, **U) on OVERTIME PAGE

Note: * Includes 9th & 10th hours, double for 11th or more.

** Labor Day ONLY, if worked.

Repairs & Renovation see (B,E,Q) on OT Page

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 12, 15, 25, 26, 29) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

(1/2) Year Terms at the following percentage of Boilermaker's Wage

1st	2nd	3rd	4th	5th	6th	7th
65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits Per Hour:

	33.5% of Hourly Wage Paid Plus Amount Below	33.5% of Hourly Wage Paid Plus Amount Below
1st Term	\$ 20.36	\$ 20.36
2nd Term	21.28	21.28
3rd Term	22.22	22.22
4th Term	23.12	23.12
5th Term	24.07	24.07
6th Term	25.00	25.00
7th Term	25.93	25.93

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

4-5

Broadband

04/01/2025

JOB DESCRIPTION Broadband

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	06/29/2025
Field Tech	\$ 52.40	\$ 53.97
Install/Repair		

For outside work (excluding installation on building construction/alteration/renovation projects), stopping at first point of attachment (demarcation), installing/maintaining/repairing broadband internet service.

SUPPLEMENTAL BENEFITS

Per Hour: \$ 23.24

OVERTIME PAY

See (B, K, *R) on OVERTIME PAGE

Note: *Two and one half times the hourly rate after the 8th hour

HOLIDAY

Paid: See (5, 6, 7, 11, 12) on HOLIDAY PAGE

4-CWA-Dist1

Carpenter

04/01/2025

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour:	07/01/2024
Piledriver	\$ 60.59 + 10.00*
Dockbuilder	\$ 60.59 + 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 45.79

OVERTIME PAY

See (B, E2, O) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour

(1)year terms:

1st	2nd	3rd	4th
\$26.98	\$32.58	\$40.96	\$49.35
+ 5.50*	+ 5.50*	+ 5.50*	+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All Terms: \$ 32.34

8-1556 Db

Carpenter

04/01/2025

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2024

Carpet/Resilient

Floor Coverer \$ 55.05
+ 8.25*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

INCLUDES HANDLING & INSTALLATION OF ARTIFICIAL TURF AND SIMILAR TURF INDOORS/OUTDOORS.

SUPPLEMENTAL BENEFITS

Per hour:

\$ 39.45

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE.

Paid for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wage per hour - (1) year terms:

1st	2nd	3rd	4th
\$ 25.20	\$ 28.20	\$ 32.45	\$ 40.33
+ 1.85*	+ 2.35*	+ 2.85*	+ 3.85*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 15.22	\$ 16.22	\$ 19.32	\$ 20.32

8-2287

Carpenter**04/01/2025**

JOB DESCRIPTION Carpenter**DISTRICT** 8**ENTIRE COUNTIES**

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per Hour: 07/01/2024

Marine Construction:

Marine Diver	\$ 75.46
	+ 10.00*

Marine Tender	\$ 55.00
	+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker	\$ 45.65
---------------	----------

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 13, 16, 18, 19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms.

1st year	\$ 26.98
	+ 5.50*
2nd year	32.58
	+ 5.50*
3rd year	40.96
	+ 5.50*
4th year	49.35
	+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits

Per Hour:

All terms	\$ 32.20
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8-1456MC

Carpenter**04/01/2025**

JOB DESCRIPTION Carpenter**DISTRICT** 8**ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2024

Building	
Millwright	\$ 59.35
	+ 13.12*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Millwright \$ 45.41

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE

Paid: See (18,19) on HOLIDAY PAGE.

Overtime See (5,6,8,11,13,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$ 32.16	\$ 37.61	\$ 43.06	\$ 53.96
+ 7.08*	+ 8.25*	+ 9.42*	+ 11.76*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$ 30.56	\$ 33.09	\$ 36.27	\$ 40.69

8-740.1

Carpenter

04/01/2025

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:

07/01/2024

Timberman \$ 55.59
+ 10.26*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

\$ 44.96

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st	2nd	3rd	4th
\$24.96	\$30.07	\$37.72	\$45.38
+ 5.55*	+ 5.55*	+ 5.55*	+ 5.55*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All terms \$ 31.95

Carpenter

04/01/2025

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Westchester

PARTIAL COUNTIES

Orange: South of but including the following, Waterloo Mills, Slate Hill, New Hampton, Goshen, Blooming Grove, Mountainville, east to the Hudson River.

Putnam: South of but including the following, Cold Spring, Tompkins Corner, Mahopac, Croton Falls, east to Connecticut border.

Suffolk: West of Port Jefferson and Patchogue Road to Route 112 to the Atlantic Ocean.

WAGES

Per hour: 07/01/2024

Core Drilling:

Driller \$ 46.25
+ 3.25*

Driller Helper \$ 36.28
+ 3.25*

Note: Hazardous Waste Pay Differential:

For Level C, an additional 15% above wage rate per hour

For Level B, an additional 15% above wage rate per hour

For Level A, an additional 15% above wage rate per hour

Note: When required to work on water: an additional \$ 3.00 per hour.

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Driller and Helper \$ 30.24

OVERTIME PAY

See (B, G, P) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

8-1536-CoreDriller

Carpenter - Building / Heavy&Highway

04/01/2025

JOB DESCRIPTION Carpenter - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Suffolk

PARTIAL COUNTIES

Nassau: Entire County EXCEPT for the portion of Nassau County that lies both west of Seaford Creek AND south of the Southern State Parkway.

WAGES

Per Hour: 07/01/2024

Carpenter
(Building) \$ 52.07

Carpenter
(Heavy Highway) 52.07

SHIFT WORK

ADD 15% to straight time hourly wage for NEW YORK STATE D.O.T. and other GOVERNMENTAL MANDATED Off-Shift Work.

SUPPLEMENTAL BENEFITS

Per Hour:

Both Carpenter
Categories \$ 33.92

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One(1) Year Terms at the following

Per Hour:

1st Term	\$ 25.56
2nd Term	30.00
3rd Term	34.44
4th Term	38.88

Supplemental Benefits

Per Hour:

All Terms: \$ 20.71

4-Reg.Council Nass/Suff

Electrician

04/01/2025

JOB DESCRIPTION Electrician

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour: 07/01/2024 12/29/2024

Tree Trimmer/Remover

Line Clearance Specialist \$ 42.80 \$ 44.51

Groundman* 25.67 26.70

These rates apply to all tree trimming/removal contracts including but not limited to "Electrical Line Clearance"/"Long Island Railroad Right of Ways".

For Building Construction or Road/Highway Construction Contracts, Heavy & Highway Laborer and Operating Engineer classifications Apply.

* Note: Groundman Classification not to exceed 20% of the company(s) workforce on Project. Please contact local office for clarification.

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024 12/29/2024

Tree Trimmer

Line Clearance Specialist
and Groundman \$21.03 \$22.90

OVERTIME PAY

See (B, E, P, S) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 16, 23, 24, 25, 26) on HOLIDAY PAGE

4-1049/Tree

Electrician

04/01/2025

JOB DESCRIPTION Electrician

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour: 07/01/2024

Electrician/Wireman \$ 61.75

Inside/Outside

SUPPLEMENTAL BENEFITS

Per Hour

Electrician/Wireman 18% of Hourly
(all categories) Wage Paid
+ \$ 34.43

NOTE: "Hourly Wage Paid" shall include any and all premium[s]

OVERTIME PAY

See (B, E, E2, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Terms at the following Percentage of Journeyman(s) Wage:

Indentured BEFORE 4/25/2020:

1st 6mnth	35%
2nd 6mnth	35%
2nd year	40%
3rd year	45%
4th year	60%
5th year	75%

Indentured AFTER 4/25/2020 (6 month terms):

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
35%	35%	37.5%	40%	42.5%	45%	50%	55%	65%	75%

Supplemental Benefits Per Hour:

07/01/2024

Indentured BEFORE 04/25/2020:

1st 6 Months	5% + \$5.64
2nd 6 Months	10% + \$6.97
3rd Year	11% + \$8.21
4rd Year	12% + \$9.64
5th Year	15% + \$12.09
6th Year	16% + \$19.11

Indentured AFTER 04/25/2020 (6 month terms):

1st	5% + \$ 5.64
2nd	10% + \$ 6.97
3rd	11% + \$ 8.24
4th	12% + \$ 9.57
5th	12% + \$ 9.64
6th	12% + \$ 9.68
7th	15% + \$ 12.13
8th	15% + \$ 12.15
9th	16% + \$ 19.11
10th	16% + \$ 19.17

NOTE: Percentages are on "Hourly Wage Paid"

NOTE: "Hourly Wage Paid" shall include any and all premium(s).

4-25

Electrician

04/01/2025

JOB DESCRIPTION Electrician

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour:	07/01/2024	04/26/2025
Telephone and Integrated Tele-Data System Electrician	\$ 41.68	\$ 42.93

This rate classification applies to ALL Voice, Data & Video work.: Excluding Fire Alarm Systems and Energy Management Systems (HVAC Controls), in those cases the regular Electrician rate applies. To ensure proper use of this rate please call Nassau Offices at (516)228-3912 or Suffolk Offices at (631)687-4882.

SUPPLEMENTAL BENEFITS

Per Hour:

Tele-Data

Electrician	18% of Hourly Wage Paid + \$ 23.61	18% of Hourly Wage Paid + \$ 24.82
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NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16, 25, 26) on HOLIDAY PAGE

4-25tela

Electrician	04/01/2025
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JOB DESCRIPTION Electrician

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour:	07/01/2024	04/26/2025
Electrician:		
Electrical Maintenance	\$ 48.29	\$ 49.79
Traffic Signal	\$ 49.25	\$ 50.75

"PLEASE NOTE"

Applicable to "EXISTING ELECTRICAL SYSTEMS" including, but not limited to TRAFFIC SIGNALS & STREET LIGHTING. Not used for addons.

SUPPLEMENTAL BENEFITS

Per Hour:

Electrical Maintenance:	14% of Hourly Wage Paid + \$23.78	14% of Hourly Wage Paid + \$25.27
Traffic Signal:	14% of Hourly Wage Paid + \$24.16	14% of Hourly Wage Paid + \$25.42

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

OVERTIME PAY

See (B, E2, K, P) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Term(s) at the following Percentage of Journeyman(s) Wage:

1st 6mo	40%	
2nd 6mo	50%	
2nd year	60%	
3rd year	70%	
4th year	80%	
5th year	90%	
Supplemental Benefits:	07/01/2024	04/26/2025
1st 6mo	5% + \$5.32	5% + \$5.63
2nd 6mo	10% + \$6.20	10% + \$6.57
2nd year	11% + \$7.61	11% + \$7.77
3rd year	12% + \$9.96	12% + \$10.53
4th year	13% + \$13.93	13% + \$14.70
5th year	14% + \$17.63	14% + \$18.58

NOTE: Percentages are on "Hourly Wage Paid"

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

4-25m

Electrician	04/01/2025
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JOB DESCRIPTION Electrician

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour: 07/01/2024 4/26/2025

Electrician

Pump & Tank \$ 47.15 \$ 48.65

SUPPLEMENTAL BENEFITS

Per Hour:

Electrician

Pump & Tank 18% of Hourly Wage paid + \$26.00 18% of Hourly Wage paid + 27.24

*Wage Paid includes any and all Premiums

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

1 Year Terms at the Following:

Per Hour:

1st	2nd	3rd	4th
\$18.53	\$19.53	\$20.53	\$21.53

SUPPLEMENTAL BENEFITS

Per Hour:

1st	5% of *Hourly Wage paid + \$7.03
2nd	8% of *Hourly Wage paid + \$7.93
3rd	8% of *Hourly Wage paid + \$8.40
4th	8% of *Hourly Wage paid + \$9.90

*Wage Paid includes any and all Premiums

4-25 Pump & Tank

Electrician Lineman	04/01/2025
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JOB DESCRIPTION Electrician Lineman

DISTRICT 4

ENTIRE COUNTIES

Nassau, Queens, Suffolk

WAGES

For Utility Distribution & Transmission Line Construction:

Per Hour: 07/01/2024

Lineman/Splicer	\$65.25
Material Man	56.77
Heavy Equip. Operator	52.20
Groundman	39.15
Flagman	29.36

For Natural Gasline Construction

Per Hour:

Journeyman U.G.Mech \$ 57.63

SUPPLEMENTAL BENEFITS

Per Hour:

Utility Distribution & Transmission Line Construction:

All Classifications 07/01/2024

32.75% of Hourly
Wage Paid +

\$15.04

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

Natural Gasline Construction

Per Hour: 07/01/2024

Journeyman U.G.Mech. 33.24

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

OVERTIME for Natural Gas Mechanic:(B,G,P)

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 16, 23, 25, 26) on HOLIDAY PAGE

Same as Above for Natural Gas Mechanic.

REGISTERED APPRENTICES

1000 hour Terms at the following Percentage of Journeyman's Wage.
(Lineman Only)

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFIT:

07/01/2024

All Terms

31.75% of Hourly
Wage Paid +
\$ 15.04

4-1049 Line/Gas

Elevator Constructor

04/01/2025

JOB DESCRIPTION Elevator Constructor

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

PARTIAL COUNTIES

Rockland: Entire County except for the Township of Stony Point

Westchester: Entire County except for the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

WAGES

Per hour:

07/01/2024

03/17/2025

Elevator Constructor

\$ 80.35

\$ 83.37

Modernization &
Service/Repair

63.16

65.54

SUPPLEMENTAL BENEFITS

Per Hour:

Elevator Constructor

\$ 46.367

\$ 47.65

Modernization &
Service/Repairs

45.217

46.47

OVERTIME PAY

Constructor See (D, M, T) on OVERTIME PAGE.

Modern/Service See (B, F, S) on OVERTIME PAGE.

HOLIDAY

Paid: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES PER HOUR:

6 MONTH TERMS:

1st Term*	2nd & 3rd Term*	4th & 5th Term	6th & 7th Term	8th & 9th Term
50%	50%	55%	65%	75%

* Note: 1st, 2nd, 3rd Terms are based on Average of the Constructor, the Modernization and the Service/Repair wage.
Terms 4 thru 9 Based on Journeyman's wage of classification Working in.

SUPPLEMENTAL BENEFITS:

	07/01/2024	03/17/2025
Elevator Constructor		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40
Modernization & Service/Repair		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	36.15	36.88
4th & 5th Term	37.19	37.58
6th & 7th Term	38.80	39.20
8th & 9th Term	40.41	40.83

4-1

Glazier	04/01/2025
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JOB DESCRIPTION Glazier

DISTRICT 8

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per hour:

	07/01/2024	05/01/2025 Additional
Glazier, Glass Tinting and Window Film	\$ 63.28	\$ 1.11***
Scaffolding, including swing scaffold	67.28	
*Mechanical Equipment	64.28	
**Repair & Maintenance	30.76	

*Mechanical equipment, scissor jacks, man lifts, booms & buckets 30' or more, but not pipe scaffolding.

**Repair & Maintenance- All repair & maintenance work on a particular building whenever performed, where the total cumulative Repair & Maintenance contract value is under \$193,000.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

	7/01/2024
Glazier, Glass Tinting Window Film, Scaffolding and Mechanical Equipment	\$ 42.13
Repair & Maintenance	24.62

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

For 'Repair & Maintenance' see (B, B2, I, S) on overtime page.

HOLIDAY

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

For 'Repair & Maintenance'

Paid: See(5, 6, 16, 25)

Overtime: See(5, 6, 16, 25)

REGISTERED APPRENTICES

Wage per hour:

(1) year terms at the following wage rates:

7/01/2024

1st term	\$ 22.34
2nd term	30.64
3rd term	40.87
4th term	50.14

Supplemental Benefits:

(Per hour)

1st term	\$ 19.27
2nd term	27.34
3rd term	32.85
4th term	36.01

8-1087 (DC9 NYC)

Insulator - Heat & Frost

04/01/2025

JOB DESCRIPTION Insulator - Heat & Frost

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour: 07/01/2024

Insulators	
Heat & Frost	\$ 71.01

SUPPLEMENTAL BENEFITS

Per Hour:

Insulators	\$ 36.76
Heat & Frost	

OVERTIME PAY

See (B, E, *Q, V) on OVERTIME PAGE

* Triple time for Labor Day (If worked)

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:

1 year terms.

Wages Per Hour:

1st	2nd	3rd	4th
\$ 31.96	\$ 39.06	\$ 46.16	\$ 53.26

Supplemental Benefits:

\$ 16.56	\$ 20.23	\$ 23.91	\$ 27.06
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4-12

Ironworker

04/01/2025

JOB DESCRIPTION Ironworker

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour: 07/01/2024 01/01/2025

Stone Derrickmen Rigger	\$ 75.40	Additional \$ 1.64*
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Stone Handset Derrickman	72.55	1.11*
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*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Stone Derrickmen Rigger \$ 45.52

Stone Handset 44.76
Derrickman

OVERTIME PAY

See (B, D1, *E, Q, **V) on OVERTIME PAGE

*Time and one-half shall be paid for all work on Saturday up to eight (8) hours and double time shall be paid for all work thereafter.

** Benefits same premium as wages on Holidays only

HOLIDAY

Paid: See (18) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 25) on HOLIDAY PAGE

Work stops at schedule lunch break with full day's pay.

REGISTERED APPRENTICES

Wage per hour:

Stone Derrickmen Rigger:

	1st	2nd	3rd	4th
07/01/2024	\$ 37.20	\$ 53.28	\$ 59.32	\$ 65.36

Supplemental Benefits:

Per hour:

07/01/2024	23.27	34.39	34.39	34.39
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Stone Handset:

1/2 year terms at the following hourly wage rate:

	1st	2nd	3rd	4th
07/01/2024	\$ 35.78	\$ 51.04	\$ 56.79	\$ 62.55

Supplemental Benefits:

Per hour:

07/01/2024	22.95	34.08	34.08	34.08
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9-197D/R

Ironworker

04/01/2025

JOB DESCRIPTION Ironworker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour: 07/01/2024 01/01/2025

Ornamental	\$ 47.65	\$ 47.90
Chain Link Fence	47.65	47.90
Guide Rail	47.65	47.90

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 66.29 \$ 67.29

OVERTIME PAY

See (B, B1, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

1 year terms

1st Term	\$ 25.98	\$ 26.45
2nd Term	28.45	28.97
3rd Term	30.80	31.36
4th Term	34.39	35.02

Supplemental Benefits per hour:

1st Term	\$ 16.29	\$ 16.29
2nd Term	18.29	18.29
3rd Term	19.29	19.29
4th Term	20.29	20.29

4-580-Or

Ironworker

04/01/2025

JOB DESCRIPTION Ironworker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

PER HOUR:

07/01/2024

01/01/2025

Ironworker:

Structural	\$ 57.20	\$ 58.45
Bridges		
Machinery		

SUPPLEMENTAL BENEFITS

PER HOUR PAID:

Journeyman	\$ 89.85	\$ 91.35
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OVERTIME PAY

See (B, B1, Q, *V) on OVERTIME PAGE

*NOTE: Benefits are calculated for every hour paid.

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6, 18, 19) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES PER HOUR:

6 month terms at the following rate:

1st	\$ 30.23	\$ 30.36
2nd	30.83	30.96
3rd - 6th	31.44	31.57

Supplemental Benefits

PER HOUR PAID:	62.47	63.48
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4-40/361-Str

Ironworker

04/01/2025

JOB DESCRIPTION Ironworker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES

Rockland: Southern section - south of Convent Road and east of Blue Hills Road.

WAGES

Per hour: 07/01/2024

Reinforcing & Metal Lathing	\$ 56.95
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"Base" Wage	55.20 plus \$ 1.75
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"Base" Wage is used to calculate overtime hours only.

SUPPLEMENTAL BENEFITS

Per hour:

Reinforcing & Metal Lathing	\$ 44.63
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OVERTIME PAY

See (B, E, Q, *X) on OVERTIME PAGE

*Only \$23.50 per Hour for non worked hours

Supplemental Benefit Premiums for Overtime Hours worked:

Time & One Half	\$ 51.13
Double Time	57.63

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 13, *18, **19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wage rates:

Prior to 01/01/2020:

1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
\$ 22.55	\$ 28.38	\$ 34.68	\$ 37.18
"Base" Wage			
\$21.00	\$26.80	\$33.10	\$35.60
plus \$1.55	plus \$1.58	plus \$1.58	plus \$1.58

"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENEFITS

Per Hour:

1st term	2nd term	3rd term	4th Term
\$18.17	\$21.34	\$22.00	\$22.50

After 01/01/2020:

1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
\$ 22.55	\$ 23.60	\$ 24.60	\$ 25.65
"Base" Wage			
\$21.00	\$22.00	\$23.00	\$24.00
plus \$1.55	plus \$1.60	plus \$1.60	plus \$1.65

"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENEFITS

Per Hour:

1st term	2nd term	3rd term	4th Term
\$18.40	\$17.40	\$16.45	\$15.45

4-46Reinf

Laborer - Building

04/01/2025

JOB DESCRIPTION Laborer - Building

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	01/06/2025
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Asbestos, Lead and Hazardous Material Abatement Laborer	\$ 40.55	\$ 41.15
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(Re-Roofing Removal See Roofer)

NOTE: Asbestos removed from Mechanical Systems not to be scrapped
See Asbestos Worker

SUPPLEMENTAL BENEFITS

Per Hour:

Laborer	\$ 20.10	\$ 21.00
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OVERTIME PAY

See (B, B2, I) on OVERTIME PAGE

07/01/2024 - *Calculate at \$39.00 per hour then add \$1.55

01/06/2025 - *Calculate at \$39.25 per hour then add \$1.90

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 28) on HOLIDAY PAGE

REGISTERED APPRENTICES

1000 hour terms at the following:

Per Hour:

1st Term	\$ 21.00*	\$ 21.48*
2nd Term	22.00**	22.48**
3rd Term	25.00***	25.48***
4th Term	27.00****	27.48****

SUPPLEMENTAL BENEFIT

Per Hour:

All Terms	\$ 14.35	\$ 15.07
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OVERTIME PAY:

07/01/2024

*Calculate at \$20.00 per hour then add \$1.00

**Calculate at \$21.00 per hour then add \$1.00

***Calculate at \$24.00 per hour then add \$1.00

****Calculate at \$26.00 per hour then add \$1.00

01/06/2025

*Calculate at \$21.20 per hour then add \$1.28

**Calculate at \$22.20 per hour then add \$1.28

***Calculate at \$24.20 per hour then add \$1.28

****Calculate at \$26.20 per hour then add \$1.28

4-NYDC(78)

Laborer - Building

04/01/2025

JOB DESCRIPTION Laborer - Building

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour: 07/01/2024

Building Laborer	\$ 44.30
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Base Wage*	41.65
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* Base Wage is for Premium/Overtime calculations only (\$2.65 difference)

SUPPLEMENTAL BENEFITS

Per Hour:

Building Laborer	\$ 32.06
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

See also(H)for Fire Watch on OVERTIME PAGE

Asbestos Worker See (B, H)

NOTE: Premium/Overtime is to be calculated on Base Wage Only

Example - \$41.65 x time and one half = \$62.48 + \$2.65 = \$65.13

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

Asbestos Worker see (5,6,8 & 28)

REGISTERED APPRENTICES

Regular Hours Work Terms

Term #1	1 hr to 1000hrs
Term #2	1001hrs to 2000hrs
Term #3	2001hrs to 3000hrs
Term #4	3001hrs to 4000hrs

Wages per hour:

1st Term	\$ 18.42
2nd Term	23.54
3rd Term	29.08
4th Term	34.07

Benefits per hour

1st Term	\$ 24.82
2nd Term	26.25
3rd Term	26.68
4th Term	26.89

4-66

Laborer - Heavy&Highway

04/01/2025

JOB DESCRIPTION Laborer - Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Laborer (Heavy/Highway):

GROUP # 1: Asphalt Rakers, Concrete Curb Formsetters.

GROUP # 2: Asphalt Shovelers, Roller Boys and Tampers.

GROUP # 3: Basic Laborer, Power Tool(Jackhammer), Landscape Construction(Non-Building), Traffic Control Personnel(flaggers)

WAGES PER HOUR:

	07/01/2024	06/01/2025
GROUP # 1		
Total Wage Paid	\$ 62.08	Additional
"Base Wage"	52.83*	\$ 2.25/Hr**
GROUP # 2		
Total Wage Paid	60.61	
"Base Wage"	51.36*	
GROUP # 3		
Total Wage Paid	56.14	
"Base Wage"	46.89*	

NOTE: * "Base Wage" for Premium/Overtime calculation Only. \$9.25 is difference between "Base" and "Total".

(**)To be allocated at a later date for all groups.

SHIFT WORK

Additional 30% to "Base Wage" for all hours worked on New York State D.O.T. and/or other Government Mandated Off-Shift Work.

Hazardous Material Work add an Additional 10% of base wage

SUPPLEMENTAL BENEFITS

Per Hour:

ALL GROUPS	\$ 36.98
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After Forty (40) paid hours in a work week

OVERTIME PAY	21.74
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OVERTIME PAY

See (B, E2, F) on OVERTIME PAGE

NOTES: Premium/Overtime Pay to be calculated on "Base Wage" ONLY

Example Group#3: \$46.89 X Time and One Half = \$70.33 + \$9.25 = \$79.58

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (1) on HOLIDAY PAGE

REGISTERED APPRENTICES

1000 hour(s) Terms at the following Percentage of the "Base Wage" except
4th Term calculate at Total Wage Paid.

1st 0-1000/Hrs.	60%
2nd 1001-2000/Hrs.	70%
3rd 2001-3000/Hrs.	80%
4th 3001-4000/Hrs.	90%

Supplemental Benefits per hour:

All APPRENTICES \$ 36.98

After Forty(40) paid hours in a work Week
21.74

4-1298

Mason	04/01/2025
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JOB DESCRIPTION Mason

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Brick/Block Layer \$ 67.14

Base Wage for OT Calculation \$ 55.93

SUPPLEMENTAL BENEFITS

Per Hour:

Brick/Block Layer \$ 34.90

OVERTIME PAY

See (A, E, E2, Q) on OVERTIME PAGE

Note: OT Calculated on Base Wage plus \$ 11.21/hr.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(800 hour) Terms at the following Percentage of Journey workers "Base Wage" plus \$ 5.94/hr.:

1st	2nd	3rd	4th	5th
50%	60%	70%	80%	90%

Supplemental Benefits per hour:

All Apprentices \$ 24.70

4-1Brk

Mason - Building	04/01/2025
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JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Building	07/01/2024	01/01/2025
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Wages per hour:

Mosaic & Terrazzo Mechanic	\$ 60.98	\$ 61.33
Mosaic & Terrazzo Finisher	58.96	59.72

SUPPLEMENTAL BENEFITS

Per hour:

Mosaic & Terrazzo Mechanic	\$ 31.36* + \$9.78	\$ 31.46* + \$10.39
Mosaic & Terrazzo Finisher	\$ 31.36* + \$9.77	\$ 31.46* + \$10.38

*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

07/01/2024- Deduct \$7.00 from hourly wages before calculating overtime.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

Easter Sunday is an observed holiday. Holidays falling on a Saturday will be observed on that Saturday. Holidays falling on a Sunday will be celebrated on the Monday.

REGISTERED APPRENTICES

Wages Per hour:

	1st 0- 1500	2nd 1501- 3000	3rd 3001- 3750	4th 3751- 4500	5th 4501- 5250	6th 5251- 6000
07/01/2024	\$ 25.19	\$ 32.39	\$ 38.18	\$ 40.78	\$ 49.00	\$ 55.75
01/01/2025	25.36	32.60	39.95	41.09	49.37	56.15

Supplemental Benefits per hour:

07/01/2024	\$7.12* + 3.43	\$9.16* + 4.40	\$17.22* + 5.87	\$23.86* + 6.84	\$24.86* + 7.83	\$27.36* + 8.80
01/01/2025	\$7.12* + 3.64	\$9.16* + 4.67	\$15.72* + 6.24	\$23.86* + 7.27	\$24.86* + 8.31	\$27.36* + 9.35

*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/3

Mason - Building

04/01/2025

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour: 07/01/2024 01/06/2025

Building-Marble Restoration: Marble, Stone & Terrazzo Polisher	\$ 47.72	\$ 47.93
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SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker:

Building-Marble Restoration: Marble, Stone & Polisher	\$ 31.50	\$ 31.86
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OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

* On Saturdays, 8th hour and successive hours paid at double hourly rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES per hour:

900 hour term at the following wage:

	1st 1- 900	2nd 901- 1800	3rd 1801- 2700	4th 2701
07/01/2024	\$ 33.40	\$ 38.18	\$ 42.94	\$ 47.72
01/06/2025	33.54	38.34	43.13	47.93
Supplemental Benefits Per Hour:				
07/01/2024	29.06	29.87	30.69	31.50
01/06/2025	29.59	30.34	31.11	31.86

9-7/24-MP

Mason - Building

04/01/2025

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour:

07/01/2024 01/06/2025

Marble Cutters & Setters

\$ 63.92 \$ 64.21

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker

\$ 40.05 \$ 40.51

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid:

See (1) on HOLIDAY PAGE

Overtime:

See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage Per Hour:

750 hour terms at the following wage

1st	2nd	3rd	4th	5th	6th	7th	8th
0- 3000	3001- 3750	3751- 4500	4501- 5250	5251- 6000	6001- 6750	6751- 7500	7500+
07/01/2024							
\$ 27.01	\$ 40.52	\$ 43.88	\$ 47.26	\$ 50.64	\$ 54.32	\$ 60.71	\$ 63.92
01/06/2025							
\$ 27.24	\$ 40.84	\$ 44.25	\$ 47.63	\$ 51.05	\$ 54.58	\$ 60.99	\$ 64.21

Supplemental Benefits per hour:

1st	2nd	3rd	4th	5th	6th	7th	8th
07/01/2024							
\$ 26.42	\$ 29.76	\$ 30.61	\$ 31.44	\$ 32.28	\$ 37.55	\$ 39.23	\$ 40.05
01/06/2025							
\$ 26.88	\$ 30.14	\$ 30.95	\$ 31.78	\$32.59	\$38.07	\$ 39.71	\$ 40.51

9-7/4

Mason - Building

04/01/2025

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:

07/01/2024 01/06/2025

Marble, Stone,

Maintenance Finishers:

\$ 27.72 \$ 27.99

Note 1: An additional \$2.00 per hour
for time spent grinding floor using
"60 grit" and below.
Note 2: Flaming equipment operator
shall be paid an additional \$25.00 per day.

SUPPLEMENTAL BENEFITS

Per Hour:

Marble, Stone Maintenance Finishers:	\$ 15.74	\$ 15.88
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OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

*Double hourly rate after 8 hours on Saturday

HOLIDAY

Paid: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

1st term apprentice gets paid for all observed holidays.

REGISTERED APPRENTICES

WAGES per hour:

	07/01/2024	01/06/2025
0-750	\$ 22.32	\$ 22.91
751-1500	23.04	23.59
1501-2250	23.75	24.26
2251-3000	24.48	24.95
3001-3750	25.56	25.96
3751-4500	27.00	27.32
4501+	27.72	27.99

Supplemental Benefits:

Per hour:

0-750	12.69	12.43
751-1500	13.10	12.89
1501-2250	13.51	13.35
2251-3000	13.91	13.80
3001-3750	14.52	14.50
3751-4500	15.33	15.41
4501+	15.74	15.88

9-7/24M-MF

Mason - Building

04/01/2025

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Nassau, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2024 12/02/2024

Tile Setters	\$ 63.91	\$ 64.16
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SUPPLEMENTAL BENEFITS

Per Hour:

\$ 27.66*	\$ 28.11*
+8.50	+8.51

* This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

Work beyond 10 hours on Saturday shall be paid at double the hourly wage rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

(750 hour) term at the following wage rate:

Term:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1-750	751-1500	1501-2250	2251-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6750	6501-7000
07/01/2024									
\$22.19	\$27.21	\$34.45	\$39.46	\$43.07	\$46.58	\$50.23	\$55.24	\$57.71	\$62.00
12/02/24									
\$22.29	\$27.35	\$34.36	\$39.41	\$43.05	\$46.60	\$50.29	\$55.33	\$57.84	\$62.20

Supplemental Benefits per hour:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
07/01/2024									
\$12.55*	\$12.55*	\$15.36*	\$15.36*	\$16.36*	\$17.86*	\$18.86*	\$18.86*	\$18.86*	\$24.11*
+\$.76	+\$.81	+\$.91	+\$.96	+\$1.43	+\$1.48	+\$1.91	+\$1.97	+\$4.57	+\$5.18
12/02/24									
\$12.70*	\$12.70*	\$15.81*	\$15.81*	\$16.81*	\$18.31*	\$19.31*	\$19.31*	\$19.31*	\$24.56*
+\$.76	+\$.81	+\$.91	+\$.96	+\$1.43	+\$1.48	+\$1.91	+\$1.97	+\$4.57	+\$5.18

* This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/52A

Mason - Building	04/01/2025
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JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Nassau, Rockland, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	12/02/2024
Tile Finisher	\$ 49.08	\$ 49.21

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2024	12/02/2024
	\$ 24.56*	\$ 25.01*
	+ 8.32	+ 8.33

*This portion of benefits is subjected to same premium rate as shown for overtime wages

OVERTIME PAY

See (B, E, Q, *V) on OVERTIME PAGE

*Work beyond 10 hours on a Saturday shall be paid at double the hourly wage rate.

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

9-7/88A-tf

Mason - Building / Heavy&Highway	04/01/2025
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JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025
Marble-Finisher	\$ 49.99	\$ 50.22

SUPPLEMENTAL BENEFITS

Journeyworker:

Per hour

Marble- Finisher	\$ 37.39	\$ 37.69
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OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

Work beyond 8 hours on a Saturday shall be paid at double the rate.

HOLIDAY

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

When an observed holiday falls on a Sunday, it will be observed the next day.

9-7/20-MF

Mason - Building / Heavy&Highway

04/01/2025

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Cement Mason \$ 57.72

SUPPLEMENTAL BENEFITS

Per Hour:

Cement Mason \$ 34.66

1.5 X overtime rate \$ 62.95

2 X overtime rate \$ 69.32

OVERTIME PAY

See (B1, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wage:

1st Term \$ 23.39

2nd Term \$ 28.29

3rd Term \$ 33.69

Supplement Benefits per hour paid:

	ST	1.5X OT	2X OT
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1st Term	\$ 14.86	\$ 22.30	\$ 29.72
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2nd Term	\$ 15.16	\$ 22.75	\$ 30.32
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3rd Term	\$ 15.27	\$ 22.91	\$ 30.54
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4-780

Mason - Building / Heavy&Highway

04/01/2025

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

NOTE: Shall include but not limited to Precast concrete slabs (London Walks) Marble and Granite pavers 2'x 2' or larger.

Per Hour:

07/01/2024

05/01/2025

Additional

\$ 3.42/Hr+

Stone Setter \$ 69.91

Base Rate 53.84*

Stone Tender \$51.82

Base Rate 44.54*

(+)To be allocated at a later date for all classes.

SUPPLEMENTAL BENEFITS

Per Hour:

Stone Setter \$ 42.52

Stone Tender 23.15

OVERTIME PAY

See (*C, **E, Q) on OVERTIME PAGE

* Base Rates are used to Calculate Overtime Premiums then adding in: \$15.81/Hr. for Stone Setter or \$7.28/Hr. for Stone Tender.

** On weekdays the eighth (8th) and ninth (9th) hours are time and one-half all work thereafter is paid at double the hourly rate.

*** The first nine (9) hours on Saturday is paid at time and one-half all work thereafter is paid at double the hourly rate.

HOLIDAY

Paid: See (*18) on HOLIDAY PAGE

Overtime: See (5, 6, 10) on HOLIDAY PAGE

Paid: * Must work first 1/2 of day.

REGISTERED APPRENTICES

Per Hour:

Stone Setter(800 hour) terms at the following Percentage of Stone Setters Base wage rate per hour plus \$7.32:

1st	2nd	3rd	4th	5th	6th
50%	60%	70%	80%	90%	100%

Supplemental Benefits:

All Apprentices \$ 25.85

4-1Stn

Mason - Heavy&Highway

04/01/2025

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Pointer, Caulkers & Cleaners \$ 63.69

SUPPLEMENTAL BENEFITS

Per Hour:

Pointer, Cleaners & Caulkers \$ 31.90

OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms at the following wage rates.

1st	2nd	3rd	4th
\$ 32.76	\$ 37.09	\$ 42.97	\$ 51.60

Apprentices Supplemental Benefits:

(per hour paid)

\$ 15.40	\$ 21.70	\$ 24.45	\$ 25.45
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4-1PCC

Operating Engineer - Building

04/01/2025

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

BUILDING CATEGORIES:

CLASS "AA "CRANES:

ABI Machine (150,000lbs and over or 149,999lbs and under when driving steel sheet piles),Crane, Truck Crane, Hydraulic Crane(Over 75 tons), Derrick, Dragline, Dredge, Crawler Crane, Tower Crane & Pile Driver, Vertical Drill Rig (115,000lbs and over and 114,999lbs and under).

CLASS "A":

ABI Machine (149,999 and under used for augering and drilling), Asphalt Spreader, Backhoe Crawler(360 swing), Barrier Machine, CAP (ice machine), Cherrypicker CAP (over 70 tons), CMI or Maxim Spreader, Concrete Pump, Directional Boring, GradAll, Grader, Hydraulic Cherrypicker/Crane (2seats), Hoist (3drum or multi platform), Laser Screed, Loading Machine (Bucket/CAP 10yds or more), Milling Machine (Large), Pipeline Welder, Plant Engineer, Power Winch (stone setting/structural steel), Powerhouse, Scoop Carry-All Scraper (in tandem), Side boom Tractor (includes tank work), Track Alignment Machine, Stone Spreader (self propelled), Striping Machine (long line/truck mounted), Tree Grapple, Zamboni.

CLASS "B":

Backhoe (other than 360), Belt Screte, Boom Truck, Bulldozer, Boring Machine/Auger, Cherry Picker(under 70 Tons), Hydraulic Crane(under 75 Tons), Conveyor-Multi, Curb Machine (asphalt or concrete), Dinky Locomotive, Drill Rig (dowels)Fork Lift, Hoist (2 Drum), Loading Machine & Front End Loader, Mechanical Compactors (machine drawn), Mulch Machine(Machine Fed), Post Hole/Auger, Power Wincher (Not Included in Class "A"), Asphalt Roller, Hydraulic Pump with Boring Machine, Scoop, Carryall/Scraper, Skid Loader/Skid Steer/Bobcat, Trenching Machine, Vermeer Cutter, Work Boat, Inspection/Safety Boat.

CLASS "C":

Concrete Finish/Saw/Spreader, Dirt Roller, Hoist (1 drum, Clam Shell), Interior Hoist, Milling Machine (small), Oiler Truck Crane (pile work), Power Broom, Vactor Truck, VacAll.

CLASS "D":

Boiler (thermoplastic), Concrete Breaker, Conveyer, Curing Machine, Fork Lift or Walk Behind (power operated), Generator, Hydra Hammer, Compactors (mechanical or hand operated), Maintenance Engineer (small equipment/well point/welding & burning), Mechanic (field man), Micro-Trap with Compressor, Oiler (Truck Crane Boom 100ft or more) Power Winch Truck Mounted (Stone Setter/Struct. Steel), Pin Puller, Portable Heaters, Power Buggies, Pump (double action diaphragm), Pump (4 inch or over), Pump (hydraulic/submersible) Jet Pump, Pulvi-Mixer, Ridge Cutter, Shot Blaster.

CLASS "E":

Batching Plant, Compressor (structural steel/2 or more battery), Generator (small), Grinder, Ground Heater, Power Grinder, Mixer with Skip, Mulching Machine (hand fed), Oiler, Pipeline Welder Helper, Power Washer, Pumps (up to 3 inch/single action 1 to 3 inches), Pump (gypsum), Root Cutter, Stump Chipper, Track Tamper, Tractor (caterpillar or wheel), Trenching Machine (hand), Welding Machine (pile work/structural steel), Deckhand on Work/Inspection/Safety Boat.

	07/01/2024	06/01/2025
Class "AA"	\$ 93.08	Additional 3%/hr*
Cranes:		
Boom length over 100 feet add \$ 1.00 per hour		
Boom length over 150 feet add \$ 1.50 per hour		
Boom length over 250 feet add \$ 2.50 per hour		
Boom length over 350 feet add \$ 3.00 per hour		
Class "A"	\$ 77.79	
Add \$3.50 for Hazardous Waste Work		
Class "B"	\$ 73.91	
Add \$2.50 for Hazardous Waste Work		
Class "C"	\$ 71.33	
Add \$1.50 for Hazardous Waste Work		
Class "D"	\$ 54.56	
Add \$1.00 for Hazardous Waste Work		
Class "E"	\$ 52.29	

(*)To be allocated at a later date for all classes.

SUPPLEMENTAL BENEFITS

Per Hour:

All Classes	\$ 41.65
Overtime Rate	\$ 37.10

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One(1) Year Terms at the following Rate:

1st Term	\$ 28.00
2nd Term	\$ 29.00
3rd Term	\$ 30.00

Supplemental Benefits per hour:

All Apprentices	\$ 15.64
Overtime Rate	\$ 5.60

4-138

Operating Engineer - Building / Heavy&Highway

04/01/2025

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 08/01/2024

Well Driller \$ 41.85 \$ 43.11

Well Driller
Helper \$ 36.26 \$ 37.35

Hazardous Waste Differential

Added to Hourly Wage:

Level A	\$ 3.00
Level B	\$ 2.00
Level C	\$ 1.00

Monitoring Well Work

Add to Hourly Wage:

Level A	\$ 3.00
Level B	\$ 2.00

SUPPLEMENTAL BENEFITS

Per Hour:

Well Driller 10% of straight
& Helper time rate plus \$ 13.50

Additional \$ 4.25/Hr. for Premium Time Hours Worked

OVERTIME PAY

See (B2, P, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 16, 23) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 23) on HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentices at 12 Month Terms

Wages Per Hour:

1st Term	\$ 28.00
2nd Term	\$ 29.00
3rd Term	\$ 30.00

SUPPLEMENTAL BENEFITS

Per Hour:

All Terms 10% of Wage + \$ 13.50

Additional \$4.25/Hr. for premium time hours worked.

Operating Engineer - Heavy&Highway**04/01/2025**

JOB DESCRIPTION Operating Engineer - Heavy&Highway**DISTRICT** 4**ENTIRE COUNTIES**

Nassau, Suffolk

WAGES

Party Chief - One who directs a survey party

Instrument Man - One who runs the instrument and assists Party Chief

Rodman - One who holds the rod and in general, assists the survey party

Categories cover GPS & Under Ground Surveying

Per Hour: 07/01/2024

Heavy Highway/Building

Party Chief \$ 76.04

Instrument Man 56.67

Rodman 47.80

SUPPLEMENTAL BENEFITS

Per Hour:

Heavy Highway/Building \$ 43.40

Premium*:
Heavy Highway/Building 47.70Premium**:
Heavy Highway/Building 57.58

* Applies to instances where 1-1/2 regular rate are paid

**Applies to instances where 2 times the rate are paid.

OVERTIME PAY

See (B, *E, Q) on OVERTIME PAGE

* Double-time paid on the 9th hour on Saturday.

HOLIDAY

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

4-15D-N/S co.

Operating Engineer - Heavy&Highway**04/01/2025**

JOB DESCRIPTION Operating Engineer - Heavy&Highway**DISTRICT** 4**ENTIRE COUNTIES**

Nassau, Suffolk

WAGES

HEAVY and HIGHWAY CATEGORIES:

CLASS "AA" CRANES:

ABI Machine (150,000lbs and over), ABI Machine (149,000lbs and under driving steel sheets), Crane, Truck Crane, Derrick, Dragline, Dredge, Crawler Crane, Tower Crane, Pile Driver, Hydraulic Crane (75 Tons & Over).

CLASS "A":

ABI Machine (149,000lbs and under for Augering or Drilling), Asphalt Spreader, Backhoe Crawler (360 Swing & over 150,000lbs), Backhoe Crawler (360 Swing & under 149,000lbs), Barrier Machine, Cherrypicker Cap (over 70 tons), CMI or Maxim Spreader, Concrete Pump, Directional Boring, Grader, Gradall, Hoist (3 drum or multi-platform), Hydraulic Cherrypicker/crane (2 seats), Loading Machine (bucket 10 yds. or more), Laser Screed, Milling Machine (Large), Pipeline Welder, Plant Engineer. Power Winch-Stone Setting/Structural Steel or Truck Mounted, Powerhouse, Scoop-Carryall-Scaper in Tandem, Side Boom Tractor, Side Boom Tractor (Tank Work), Stone Spreader(self propelled), Striping Machine (long line/truck mounted), Tree Grapple, Tank Work, Track Alignment Machine.

CLASS "B":

Backhoe (other than 360), Belt Screte, Boom Truck, Bulldozer, Boring Machine/Auger, Hydraulic Crane(75 Tons & Under), Cherry Picker (under 70 tons), Conveter-Multi, Curb Machine Asphalt/Concrete, Dinky Locomotive, Drill Rig for Dowels, Field Mechanic, Fork Lift, Hoist (2 Drum), Loading Machine, Loading Machine (Front End), Mechanical Compactors (Machine Drawn), Mulching Machine (Machine Fed), Post Hole/Auger, Power Winch (other than structural steel), Pump Hydraulic (with boring machine), Asphalt Roller, Scoop (carry-all, scraper), Skid Loader/Steer, Vermeer Cutter, Work Boat, Inspection & Safety Boat.

CLASS "C":

Concrete Finish/Saw/Spreader Machines, Dirt Roller, Hoist (1 drum, clam shell), Interior Hoist, Oiler Truck Crane(Pile work), Power Broom(Sweeper), Small Milling Machine, Vactor Truck/Vac-All Truck, Tack Oil Truck.

CLASS "D":

Boiler (Thermoplastic), Concrete Breaker, Conveyor, Curing Machine, Fireman, Fork lift (walk behind), Generator, Hydra Hammer, Maintenance Engineer (small equipment/Well Point/Welding & Burning), Compactors (hand operated), Pin Puller, Portable Heaters, Power Buggies, Pulvi Mixer, Pumps (double action/4 inch and over/Hydraulic/Submersible & Jet), Ridge Cutter, Robotic Unit Operator(Trenchless Pipe Rehab-Cleaning & Television of Sewers/CCTV Inspection), Shotblaster.

CLASS "E":

Batching Plant (On Job Site), Compressor (structural steel/2 or more in battery), Generator(small), Grinder, Ground Heater(boilers), Power Grinder, Mixer (with skip), Mulching Machine (hand feed), Oiler, Pipeline Welder Helper, Power Washer, Pump(up to 3 inches/Gypsum/Single action 1 to 3 inches), Root Cutter, Stump Grinder, Track Tamper, Tractor (caterpillar or wheel), Trenching Machine (hand), Welding Machine (Pile Work/Structural Steel), Deckhand (on Work/Inspection/Safety Boat).

	07/01/2024	06/01/2025
Class "AA"	\$ 92.25	Additional
Cranes:		3%/hr
Boom Length over 100 feet add	\$ 1.00 per hour	
Boom Length over 150 feet add	\$ 1.50 per hour	
Boom Length over 250 feet add	\$ 2.00 per hour	
Boom Length over 350 feet add	\$ 3.00 per hour	
Class "A"	81.94	
Add \$3.50 for Hazardous Waste Work.		
Class "B"	76.72	
Add \$2.50 for Hazardous Waste Work.		
Class "C"	74.07	
Add \$1.50 for Hazardous Waste Work		
Class "D"	55.88	
Add \$1.00 for Hazardous Waste Work		
Class "E"	54.56	

(*)To be allocated at a later date for all classes.

SHIFT WORK

ADD 30% to straight time hourly wage for NEW YORK STATE D.O.T. and other GOVERNMENTAL MANDATED off-shift work.

SUPPLEMENTAL BENEFITS

Per Hour:

ALL CLASSES \$ 41.40

Note: OVERTIME AMOUNT 37.10

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 8, 15, 20, 22, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 8, 15, 20, 22, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

REGISTERED APPRENTICES

One(1) Year Terms at the following Rate:

1st Term	\$ 28.00
2nd Term	\$ 29.00
3rd Term	\$ 30.00

SUPPLEMENTAL BENEFITS:

APPRENTICES	15.64
Note: Overtime Amount	5.60

Operating Engineer - Marine Dredging

04/01/2025

JOB DESCRIPTION Operating Engineer - Marine Dredging

DISTRICT 4

ENTIRE COUNTIES

Albany, Bronx, Cayuga, Clinton, Columbia, Dutchess, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Orange, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

WAGES

These wages do not apply to Operating Engineers on land based construction projects. For those projects, please see the Operating Engineer Heavy/Highway Rates. The wage rates below for all equipment and operators are only for marine dredging work in navigable waters found in the counties listed above.

Per Hour: 07/01/2024

CLASS A1 \$ 45.26

Deck Captain, Leverman,
Mechanical Dredge Operator,
Licensed Tug Operator 1000HP or more.

CLASS A2 40.33

Crane Operator (360 swing)

CLASS B To conform to Operating Engineer
Dozer, Front Loader Prevailing Wage in locality where work
Operator on Land is being performed including benefits.

CLASS B1 39.14

Derrick Operator (180 swing)
Spider/Spill Barge Operator
Operator II, Fill Placer, Engineer
Chief Mate, Electrician, Chief Welder,
Maintenance Engineer, Licensed Boat, Crew Boat Operator

CLASS B2 36.84

Certified Welder

CLASS C1 35.83

Drag Barge Operator,
Steward, Mate,
Assistant Fill Placer

CLASS C2 34.68

Boat Operator

CLASS D 28.81

Shoreman, Deckhand, Oiler,
Rodman, Scowman, Cook,
Messman, Porter/Janitor

SUPPLEMENTAL BENEFITS

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B \$ 12.00 plus 7%
of straight time
wage, Overtime hours
add \$ 0.63

All Class C & D \$ 11.75 plus 7%
of straight time
wage, Overtime hours
add \$ 0.50

OVERTIME PAY

See (B2, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarDredge

Operating Engineer - Survey Crew - Consulting Engineer**04/01/2025**

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer**DISTRICT** 9**ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES

Dutchess: That part in Dutchess County lying South of the North City line of Poughkeepsie.

WAGES

Feasibility and preliminary design surveying, any line and grade surveying for inspection or supervision of construction.

Per hour: 07/01/2024

Survey Classifications

Party Chief \$ 49.39

Instrument Man 40.96

Rodman 35.63

SUPPLEMENTAL BENEFITS

Per Hour:

All Crew Members: \$ 23.75

OVERTIME PAY

OVERTIME:.... See (B, E*, Q, V) ON OVERTIME PAGE.

*Double-time paid on the 9th hour on Saturday.

HOLIDAY

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

9-15dconsult

Operating Engineer - Trenchless Pipe Rehab**04/01/2025**

JOB DESCRIPTION Operating Engineer - Trenchless Pipe Rehab**DISTRICT** 4**ENTIRE COUNTIES**

Nassau, Suffolk

WAGES

IMPORTANT NOTE: This Category & Classifications are now located in
Operating Engineers/Heavy Highway & Laborers/ Heavy Highway.

Per Hour:

07/01/2024
(SEE)

Robotic Unit Operator Operator(class D)

Technician/Boiler, Generator Operator(class D)

AM Liner/Hydra Seal Laborer(Grp#3)

Hobas Pipe, Polyethylene Pipe or
Pull and Inflate Liner Laborer(Grp#3)**OVERTIME PAY****HOLIDAY**

4-138TrchPReh

Painter**04/01/2025**

JOB DESCRIPTION Painter**DISTRICT** 8**ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	05/01/2025 Additional
Brush	52.86*	\$ 2.62**
Abatement/Removal of lead based or lead containing paint on materials to be repainted.	52.86*	
Spray & Scaffold	\$ 55.86*	
Fire Escape	55.86*	
Decorator	55.86*	
Paperhanger/Wall Coverer	55.09*	

*Subtract \$ 0.10 to calculate premium rate.

** To be allocated at a later date.

SHIFT WORK

Counties of Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, and Westchester; Agency/Government mandated off-shift work to be paid at time and one-half the hourly wage.

SUPPLEMENTAL BENEFITS

Per hour:	
Paperhanger	\$ 36.73
All others	34.31
Premium	38.28**

**Applies only to "All others" category, not paperhanger journeyworker.

OVERTIME PAY

See (A, E, R) on OVERTIME PAGE

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One (1) year terms at the following wage rate.

Per hour:	07/01/2024
Appr 1st term...	\$ 20.22*
Appr 2nd term...	25.93*
Appr 3rd term...	31.61*
Appr 4th term...	42.40*

*Subtract \$ 0.10 to calculate premium rate.

Supplemental benefits:

Per Hour:	
Appr 1st term...	\$ 16.89
Appr 2nd term...	20.95
Appr 3rd term...	24.10
Appr 4th term...	30.57

8-NYDC9-B/S

Painter

04/01/2025

JOB DESCRIPTION Painter

DISTRICT 8

ENTIRE COUNTIES

Putnam, Suffolk, Westchester

PARTIAL COUNTIES

Nassau: All of Nassau except the areas described below: Atlantic Beach, Ceaderhurst, East Rockaway, Gibson, Hewlett, Hewlett Bay, Hewlett Neck, Hewlett Park, Inwood, Lawrence, Lido Beach, Long Beach, parts of Lynbrook, parts of Oceanside, parts of Valley Stream, and Woodmere. Starting on the South side of Sunrise Hwy in Valley Stream running east to Windsor and Rockaway Ave., Rockville Centre is the boundary line up to Lawson Blvd. turn right going west all the above territory. Starting at Union Turnpike and Lakeville Rd. going north to Northern Blvd. the west side of Lakeville road to Northern blvd. At Northern blvd. going east the district north of Northern blvd. to Port Washington Blvd. West of Port Washington blvd. to St. Francis Hospital then north of first traffic light to Port Washington and Sands Point, Manor HAVen, Harbour Acres.

WAGES

Per hour:	07/01/2024	05/01/2025
Drywall Taper:	\$ 52.86*	Additional
Scaffold:	\$ 55.86*	\$ 2.62**

*Subtract \$ 0.10 to calculate premium rate.

** To be allocated a later date.

SHIFT WORK

Agency/Government mandated off-shift work to be paid at time and one-half hourly wage

SUPPLEMENTAL BENEFITS

Per hour:	
Journeyman	\$ 34.31

OVERTIME PAY

See (A, E, R) on OVERTIME PAGE

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages - Per Hour:

1500 hour terms at the following wage rate:

1st term	\$ 20.22*
2nd term	25.93*
3rd term	31.61*
4th term	42.40*

*Subtract \$ 0.10 to calculate premium rate.

Supplemental Benefits - Per hour:

One year term (1500 hours) at the following dollar amount.

1st year	\$ 16.89
2nd year	20.95
3rd year	24.10
4th year	30.57

8-NYDCT9-DWT

Painter - Bridge & Structural Steel

04/01/2025

JOB DESCRIPTION Painter - Bridge & Structural Steel

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour:	
STEEL:	
Bridge Painting:	07/01/2024
	\$ 56.00
	+ 10.35*

ADDITIONAL \$7.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

NOTE: All premium wages are to be calculated on base rate per hour only.

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SHIFT WORK

When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11pm or 11pm-7am.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker:

\$ 12.43
+ 31.55*

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid:

See (1) on HOLIDAY PAGE

Overtime:

See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage - Per hour:

Apprentices: (1) year terms.

1st year	\$ 22.40 + 4.14
2nd year	\$ 33.60 + 6.21
3rd year	\$ 44.80 + 8.28
Supplemental Benefits - Per hour:	
1st year	\$ 1.16 + 12.62
2nd year	\$ 7.46 + 18.93
3rd year	\$ 9.94 + 25.24

NOTE: All premium wages are to be calculated on base rate per hour only.

8-DC-9/806/155-BrSS

Painter - Line Striping

04/01/2025

JOB DESCRIPTION Painter - Line Striping

DISTRICT 8

ENTIRE COUNTIES

Albany, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Nassau, Orange, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per hour:

Painter (Striping-Highway):	07/01/2024	04/01/2025	04/01/2026
Striping-Machine Operator*	\$ 34.12	\$ 35.49	\$ 36.93
Linerman Thermoplastic	41.12	42.74	44.44

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety.

SHIFT WORK

When directly specified in public agency or authority contract documents there shall be a 30% night shift premium pay differential for all work performed after 9:00pm and before 5:00am.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyworker:

Striping Machine Operator:	\$23.65	\$ 24.30	\$ 24.95
Linerman Thermoplastic:	23.65	24.30	24.95

OVERTIME PAY

See (B, B2, E2, F, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 20) on HOLIDAY PAGE

Overtime: See (5, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

One (1) year terms at the following wage rates:

	07/01/2024	01/01/2025	04/01/2025	04/01/2026
1st Term:	\$ 16.00	\$ 16.50	\$ 16.50	\$ 16.50
2nd Term:	20.47	20.47	21.29	22.16
3rd Term:	27.30	27.30	28.39	29.54

Supplemental Benefits per hour:

All terms:	\$ 23.65	\$ 23.65	\$ 24.30	\$ 24.95
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8-1456-LS

Painter - Metal Polisher

04/01/2025

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 8

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

	07/01/2024
Metal Polisher	\$ 39.33
Metal Polisher*	40.43
Metal Polisher**	43.33

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Journeyworker:

All classification \$ 12.79

OVERTIME PAY

See (B, E, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2024
1st year	\$ 19.67
2nd year	21.63
3rd year	23.60

1st year*	\$ 22.06
2nd year*	22.07
3rd year*	24.14
1st year**	\$ 22.17
2nd year**	24.13
3rd year**	26.10

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:

Per hour:

1st year	\$ 8.69
2nd year	8.69
3rd year	8.69

8-8A/28A-MP

Plasterer	04/01/2025
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JOB DESCRIPTION Plasterer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per hour:

	07/01/2024	08/01/2024
Building:		
Plasterer/Traditional &	\$ 47.72	\$ 47.99
Spraying Fireproofing	+ \$5.00*	+ \$5.62*

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	\$ 25.35	\$ 26.10
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

*This portion is not subjected to OT premiums.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:

(Per hour)

800 hours term:

	07/01/2024	08/01/2024
1st term	\$ 19.30 + 0.68*	\$ 19.44+ 0.68*
2nd term	22.53 + 0.81*	22.69+ 0.81*
3rd term	25.79 + 0.95*	25.98+ 0.95*

*This portion is not subjected to OT premiums.

Supplemental Benefits:

(Per hour):

(800) hours term:

1st term	\$ 11.59	\$ 11.95
2nd term	12.02	12.44
3rd term	12.52	13.08

9-262

Plumber	04/01/2025
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JOB DESCRIPTION Plumber

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour:	07/01/2024	05/01/2025
Plumber/ PUMP & TANK	\$ 48.24	\$ 48.24

SUPPLEMENTAL BENEFITS

Per Hour:

Plumber	\$ 38.24	\$ 40.74
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OVERTIME PAY

See (B, B2, E2, Q, *V) on OVERTIME PAGE
(V) For Sundays & Holidays if Worked Only

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One(1) Year Terms at the Following
Percentage of Journeyman's wage:

1st Term	30%
2nd Term	40%
3rd Term	50%
4th Term	60%
5th Term	70%

Supplemental Benefits Per Hour:

1st Term	\$ 25.48	\$ 27.98
2nd Term	\$26.22	28.72
3rd Term	\$27.14	29.64
4th Term	\$27.61	30.11
5th Term	\$30.99	33.49

4-200 Pump & Tank

Plumber	04/01/2025
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JOB DESCRIPTION Plumber

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour:

	07/01/2024	11/01/2024	05/01/2025
Plumber MAINTENANCE ONLY	\$35.05	\$ 35.55	\$ 36.05

Maintenance: Correction of problem(s)with the existing fixture or group of fixtures, preventive repairs or servicing of said fixtures

SUPPLEMENTAL BENEFITS

Per Hour:

Plumber Maintenance	\$ 22.43	\$ 22.93	\$ 23.43
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OVERTIME PAY

See (B, B2, J) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

4-200 Maintance

Plumber	04/01/2025
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JOB DESCRIPTION Plumber

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour:	07/01/2024	11/01/2024	05/01/2025
Plumber	\$ 58.98	\$ 59.73	\$ 60.73

SUPPLEMENTAL BENEFITS

Per Hour:

Plumber	\$ 50.70	\$ 51.45	\$ 51.95
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OVERTIME PAY

See (A, E, Q, *V) on OVERTIME PAGE

CODE "V" is only for SUNDAYS and HOLIDAYS THAT ARE WORKED

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One(1) Year Terms at the following percentage of Plumbers Rate:

1st	2nd	3rd	4th	5th
30%	40%	50%	60%	70%

Supplemental Benefits per hour:

	07/01/2024	11/01/2024	05/01/2025
1st Term	\$ 36.02	\$ 36.77	\$ 37.27
2nd Term	38.51	39.33	39.76
3rd Term	40.03	40.78	42.96
4th Term	41.68	42.43	42.93
5th Term	43.41	44.16	44.66

4-200

Roofer

04/01/2025

JOB DESCRIPTION Roofer

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour	07/01/2024	05/01/2025
ROOFER/Waterproofers		

Total Wage to be Paid	\$ 57.25	Additional \$ 3.25/hr*
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"Base" Wage 50.25**

(*)To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

ROOFER/Waterproofers	\$ 38.11
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OVERTIME PAY

Per Hour:

NEW ROOF SEE (B,E,Q)

RE-ROOF SEE (B,E,E2,Q)

** Overtime Pay to be calculated on "BASE" Wage then add \$7.00.

(Example: \$50.25 x time and one half = \$75.38 + \$7.00 = \$82.38)

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 13, *16, **25) on HOLIDAY PAGE

Note: Time and One Half the Hourly Base Rate + \$7.00 if worked.

REGISTERED APPRENTICES

(1) Year terms at the following Percentage of Roofers/Waterproofers Base Wage.

1st	2nd	3rd	4th
40%	50%	70%	80% + \$ 5.60/Hr.

Supplemental Benefits per hour:

1st Term	\$ 10.64
2nd Term	13.22

3rd Term	26.88
4th Term	36.22

4-154

Sheetmetal Worker	04/01/2025
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JOB DESCRIPTION Sheetmetal Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per Hour:

07/01/2024	08/01/2024
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Sign Erector	\$ 58.00	\$ 60.00
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NOTE: Structurally Supported Overhead Highway Signs(See STRUCTURAL IRON WORKER CLASS)

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024	08/01/2024
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Sign Erector	\$ 57.12	\$ 58.31
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OVERTIME PAY

See (B, F, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

6 month Terms at the following percentage of Sign Erectors wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
35%	40%	45%	50%	55%	60%	65%	70%	75%	80%

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 18.27	\$ 20.75	\$ 25.22	\$ 25.70	\$ 34.66	\$ 37.74	\$ 41.65	\$ 44.78	\$ 47.93	\$ 51.04

08/01/2024

\$ 18.65	\$ 21.16	\$ 23.69	\$ 26.22	\$35.39	\$ 38.52	\$ 42.55	\$ 45.75	\$ 48.96	\$ 52.15
4-137-SE									

Sheetmetal Worker	04/01/2025
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JOB DESCRIPTION Sheetmetal Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:

07/01/2024	11/01/2024
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Sheetmetal Worker	\$ 61.09	\$ 62.34
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Maintenance of Fans Temporary Operation	48.87	51.42
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SUPPLEMENTAL BENEFITS

Per Hour:

Sheetmetal Worker	\$ 53.25	\$ 55.00
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Maintenance Worker	53.25	55.00
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OVERTIME PAY

See (B, E, E2, Q, V) on OVERTIME PAGE

For Maintenance See Codes B,E, Q & V

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour: Wages

Six(6) Month Terms As Follows:

1st & 2nd Term	\$ 21.26	\$ 21.70
3rd & 4th Term	27.39	27.95
5th & 6th Term	33.52	34.21
7th & 8th Term	42.75	43.63
9th Term	48.55	49.85

Per Hour: Supplemental Benefits

1st & 2nd Term	\$ 19.66	\$ 19.72
3rd & 4th Term	26.73	26.97
5th & 6th Term	31.57	31.98
7th & 8th Term	38.78	39.45
9th Term	43.62	44.47

4-28

Steamfitter

04/01/2025

JOB DESCRIPTION Steamfitter

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 01/01/2025

AC Service/Heat Service & Refrigeration	\$ 46.10	\$ 46.60
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Refrigeration, A/C, Oil Burner and Stoker Service and Repair.

NOTE: Refrigeration Compressor installation. (Not to exceed 5 Hp combined on any one project).

NOTE: Air / Heating Compressor installation.(Not to exceed 15 tons combined on any one project).

SUPPLEMENTAL BENEFITS

Per Hour Worked:

AC Service/Heat Service & Refrigeration	\$ 20.96	\$ 22.71
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Per hour Paid: \$ 17.65 \$ 19.65

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

1 year terms

Wages per hour:

1st Term	\$ 22.31	\$ 22.55
2nd Term	26.94	27.23
3rd Term	31.38	31.72
4th Term	37.90	38.31

Benefits per hour worked:

1st Term	\$ 14.44	\$ 14.93
2nd Term	15.91	16.43
3rd Term	17.41	17.99
4th Term	19.44	20.10

Benefits per hour paid:

1st Term	\$ 11.38	\$ 11.87
2nd Term	12.85	13.37
3rd Term	14.35	14.93
4th Term	16.38	17.04

4-638B-StmFtrRef

Steamfitter

04/01/2025

JOB DESCRIPTION Steamfitter

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	10/1/2024	04/01/2025
Sprinkler/Steam AC/Heat Fitter	\$ 69.11	\$ 69.86	\$ 70.36
Temporary Heat & AC Fitter	52.54	53.11	53.49

SHIFT WORK

Add 15% to Hourly Wage and Hourly Supplemental Benefit for "Contracting Agency" Mandated Off Shift Work.

SUPPLEMENTAL BENEFITS

Per Hour:			
Sprinkler/Steam Fitter	\$ 53.49	\$ 53.49	\$ 54.24
Temporary Heat & AC Fitter	43.67	43.67	44.43

OVERTIME PAY

Note: The posted overtime rates are applicable after 8 hours plus Saturday, Sunday and Holidays:

Per Hour:			
Wages	07/01/2024	10/01/2024	04/01/2025
Sprinkler/Steam	\$ 138.22	\$ 139.72	\$ 140.66
Temp Heat/AC	105.08	106.22	106.92
Supplemental Benefits			
Sprinkler/Steam	105.99	106.84	107.49
Temp Heat/AC	85.35	87.34	87.87

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per hour:

WAGES

1 year Terms	1st	2nd	3rd	4th	5th
07/01/2024	\$ 27.98	\$ 34.96	\$ 41.94	\$ 48.92	\$ 55.90
04/01/2025	28.18	35.21	42.24	49.27	56.30

Supplemental Benefits

07/01/2024	21.80	27.05	32.28	37.53	42.76
10/01/2024	22.10	27.42	32.73	38.05	43.36
04/01/2025	22.20	27.55	32.88	38.23	43.56

Premium Time Supplemental Benefits

07/01/2024	43.60	54.10	64.56	75.06	85.52
10/01/2024	43.36	53.94	64.52	75.18	85.68
04/01/2025	43.56	54.23	64.87	75.54	86.18

4-638A-StmSpFtr

Teamster - Asphalt Delivery

04/01/2025

JOB DESCRIPTION Teamster - Asphalt Delivery

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour:

Heavy Construction Work:

Shall include the supply of Asphalt for construction, improvement and modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools, Power Generation Plants, where distance between project and asphalt plant is not more than 50 miles.

TRUCK DRIVER

07/01/2024

Asphalt Delivery

\$ 42.745

Light Construction Work:

Shall include the supply of Asphalt for construction of Single & Multi Family Homes, Town Houses, Apartment Buildings, including Driveways, Streets and Curbs within those projects. Parking Lots, Office Buildings, where distance between project and asphalt plant is not more than 50 miles.

TRUCK DRIVER

Asphalt Delivery

\$ 42.55

SHIFT WORK

PREMIUM PAY of 25% on straight time hours for New York State D.O.T. and or other GOVERNMENTAL MANDATED off shift work.

SUPPLEMENTAL BENEFITS

Per Hour:

Heavy Construction Work

TRUCK DRIVER

Asphalt Delivery

\$ 55.6025

Light Construction Work

TRUCK DRIVER

Asphalt Delivery

\$ 13.10

OVERTIME PAY

See (B, *B2, E, **I, P, R, T, ***U) on OVERTIME PAGE

Note: (B,E,P,T&*U) Apply to Heavy Construction.

Note: (B2,I,T&*U) Apply to Light Construction.

Note: (*U) Only applies after 8 hours worked on holiday.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, *16, **25) on HOLIDAY PAGE

NOTE: (*16) Paid at Double if Worked; (**25) Paid at Double if Worked.

4-282

Teamster - Building

04/01/2025

JOB DESCRIPTION Teamster - Building

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour:

Truck Driver (Building Demolition & Debris, Cesspool & Leachate Pumping)

07/01/2024

Trailers

\$ 37.90

Straight Jobs

\$ 37.90

SUPPLEMENTAL BENEFITS

Per Hour:

All Classes: \$ 40.50

OVERTIME PAY

See (B, E, S1) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 12, 15, 25, 26) on HOLIDAY PAGE

4-282

Teamster - Delivery of Concrete

04/01/2025

JOB DESCRIPTION Teamster - Delivery of Concrete

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour:

Heavy Construction Work:

Shall Include the supply of Ready-Mix Concrete for construction, improvement and modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools & Power Generation Plants, where distance between project and asphalt plant is not more than 50 miles.

TRUCK DRIVER 07/01/2024

Concrete Delivery \$ 40.005

Light Construction Work:

Shall include the supply of Ready-Mix Concrete for construction of Single & Multi Family Homes, Town Houses, Apartment Buildings, including Driveways, Streets and Curbs within those projects. Parking Lots and Office Buildings, where distance between project and asphalt plant is not more than 50 miles.

TRUCK DRIVER
Concrete Delivery \$ 36.815

SUPPLEMENTAL BENEFITS

Per Hour:

Heavy Construction Work
Concrete Delivery \$ 45.475

Light Construction Work
Concrete Delivery \$ 15.355

OVERTIME PAY

NOTE: Heavy Construction:B2,I
Light Construction:B,E,P

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, *16, **25) on HOLIDAY PAGE

NOTE:(*16) Paid at Double if Worked. (**25) Paid at Double if Worked.

4-282ns

Teamster - Heavy&Highway

04/01/2025

JOB DESCRIPTION Teamster - Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour:

Heavy Construction Work:

Shall include the construction, improvement or modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools, Power Generation Plants.

07/01/2024

Site Excavating
(Chauffeurs) \$ 43.745

Light Construction Work:

Shall include the construction, improvement and modification of Single & Multi Family Homes, Town Houses, Apartment Buildings, including Driveways, Streets and Curbs within those projects. Parking Lots and Office Buildings.

Site Excavating
(Chauffeurs) \$ 40.10

SHIFT WORK

PREMIUM PAY of 25% on straight time hours for NEW YORK STATE D.O.T. and or other GOVERNMENTAL MANDATED off shift work.

SUPPLEMENTAL BENEFITS

Per Hour:

Heavy Construction Work
Chauffeurs \$ 55.6025

Light Construction Work
Chauffeurs \$ 13.10

OVERTIME PAY

See (B, *B2, E, **I, P, ***R, ****U) on OVERTIME PAGE

Note: (B,E,P,T & *U) Apply to Heavy Construction.

Note: (B2,I,T & *U) Apply to Light Construction.

Note: (*U) Only applies after 8 hours work on holiday

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, *16, **25) on HOLIDAY PAGE

NOTE: (*16) Paid at Double if Worked. (**25) Paid at Double if Worked.

4-282

Welder

04/01/2025

JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2024

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY

HOLIDAY

1-As Per Trade

Suffolk County Residential

Carpenter - Residential	04/01/2025
-------------------------	------------

JOB DESCRIPTION Carpenter - Residential

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour: 07/01/2024
Carpenter
(Residential) \$ 33.88

***NOTE: Construction, Re-Construction, Alterations and Repairs of all residential units on housing, whether singular or multiple, condominiums, townhouses and walk-up garden apartments not to exceed four (4) stories (four stories shall be above ground level and shall not include the buildings basement nor unfinished attic space). Receiving, fastening and putting in place all modular units when used for construction of the above referenced units, regardless of from what material they are made of, such as wood, masonry, metal or plastic. Hi-Rise apartments, Motels, Nursing Homes and other Institutional type living facilities are not covered under Residential Construction.

SUPPLEMENTAL BENEFITS

Per Hour:

Carpenter
(Residential) \$ 22.31

OVERTIME PAY

See (B2, J) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One(1) Year Terms at the Following:

1st Yr	\$ 17.04
2nd Yr	19.37
3rd Yr	22.26
4th Yr	25.14

Supplemental Benefits per hour:

Apprentice(s) \$ 14.07

4-Reg Council Nass/Suff-r

Electrician - Residential	04/01/2025
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JOB DESCRIPTION Electrician - Residential

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour:	07/01/2024	04/27/2025
Electrician/ Residential Wireman	\$ 34.85	\$ 36.25

PLEASE NOTE: Shall apply to wiring of all Single or Multiple Family Dwellings and Apartment Buildings up to (3) stories.

SUPPLEMENTAL BENEFITS

Per Hour:		
Electrician	14% of Hourly Wage Paid + \$ 14.87	15% of Hourly Wage Paid + \$ 15.23

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

OVERTIME PAY

See (B, E2, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One(1) Year Term(s) at the Following Percentage
of Journeyman(s) Wage:

07/01/2024

1st Yr	\$21.61
2nd Yr	21.61
3rd Yr	23.16
4th Yr	24.70
5th Yr	26.24
6th Yr	27.79

Supplemental Benefits per hour:

Percentages are based upon "Hourly Wage Paid".

07/01/2024

1st Yr	5% + \$5.64
2nd Yr	10% + 6.97
3rd Yr	11% + 8.24
4th Yr	12% + 9.64
5th Yr	12% + 9.67
6th Yr	12% + 9.68

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

4-25resd

Iron Worker - Residential

04/01/2025

JOB DESCRIPTION Iron Worker - Residential

DISTRICT 4

ENTIRE COUNTIES

Kings, Nassau, Queens, Suffolk

WAGES

Per Hour

***IMPORTANT NOTE: These rates are limited to Residential Construction, Affordable Housing Projects, Residential Modular Erection and Pre-Fabricated Engineered Buildings.

07/01/2024

Iron Worker	\$ 48.00
Iron Worker Tender	28.00

SUPPLEMENTAL BENEFITS

Per Hour

\$ 16.63

OVERTIME PAY

See (B, B1, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 18, 20) on HOLIDAY PAGE

4-361Resd

Plumber - Residential

04/01/2025

JOB DESCRIPTION Plumber - Residential

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

PER HOUR:

	07/01/2024	11/01/2024	05/01/2025
Plumber Residential	\$ 35.05	\$ 35.55	\$ 36.05

(NOTE) Only to be used for One, Two or Multiple Family Dwellings
Two Floors or less and no Communal Kitchens or Medical Facilities.

SUPPLEMENTAL BENEFITS
PER HOUR:

Plumber			
Residential	\$ 22.43	\$ 22.93	\$ 23.43

OVERTIME PAY
See (B, B2, J) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

4-PLUM200RT

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

- (AA) Time and one half of the hourly rate after 7 and one half hours per day
- (A) Time and one half of the hourly rate after 7 hours per day
- (B) Time and one half of the hourly rate after 8 hours per day
- (B1) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday.
Double the hourly rate for all additional hours
- (B2) Time and one half of the hourly rate after 40 hours per week
- (B3) Time and one half of the hourly rate after 40 straight hours per week
- (C) Double the hourly rate after 7 hours per day
- (C1) Double the hourly rate after 7 and one half hours per day
- (D) Double the hourly rate after 8 hours per day
- (D1) Double the hourly rate after 9 hours per day
- (E) Time and one half of the hourly rate on Saturday
- (E1) Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
- (E2) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E3) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
- (E4) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E5) Double time after 8 hours on Saturdays
- (F) Time and one half of the hourly rate on Saturday and Sunday
- (G) Time and one half of the hourly rate on Saturday and Holidays
- (H) Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- (I) Time and one half of the hourly rate on Sunday
- (J) Time and one half of the hourly rate on Sunday and Holidays
- (K) Time and one half of the hourly rate on Holidays
- (L) Double the hourly rate on Saturday
- (M) Double the hourly rate on Saturday and Sunday
- (N) Double the hourly rate on Saturday and Holidays
- (O) Double the hourly rate on Saturday, Sunday, and Holidays
- (P) Double the hourly rate on Sunday
- (Q) Double the hourly rate on Sunday and Holidays
- (R) Double the hourly rate on Holidays

-
- (S) Two and one half times the hourly rate for Holidays
 - (S1) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
 - (T) Triple the hourly rate for Holidays
 - (U) Four times the hourly rate for Holidays
 - (V) Including benefits at SAME PREMIUM as shown for overtime
 - (W) Time and one half for benefits on all overtime hours.
 - (X) Benefits payable on Paid Holiday at straight time. If worked, additional benefit amount will be required for worked hours. (Refer to other codes listed.)

Holiday Codes

PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

- | | |
|--------|---|
| (1) | None |
| (2) | Labor Day |
| (3) | Memorial Day and Labor Day |
| (4) | Memorial Day and July 4th |
| (5) | Memorial Day, July 4th, and Labor Day |
| (6) | New Year's, Thanksgiving, and Christmas |
| (7) | Lincoln's Birthday, Washington's Birthday, and Veterans Day |
| (8) | Good Friday |
| (9) | Lincoln's Birthday |
| (10) | Washington's Birthday |
| (11) | Columbus Day |
| (12) | Election Day |
| (13) | Presidential Election Day |
| (14) | 1/2 Day on Presidential Election Day |
| (15) | Veterans Day |
| (16) | Day after Thanksgiving |
| (17) | July 4th |
| (18) | 1/2 Day before Christmas |
| (19) | 1/2 Day before New Years |
| (20) | Thanksgiving |
| (21) | New Year's Day |
| (22) | Christmas |
| (23) | Day before Christmas |
| (24) | Day before New Year's |
| (25) | Presidents' Day |
| (26) | Martin Luther King, Jr. Day |
| (27) | Memorial Day |
| (28) | Easter Sunday |

(29) Juneteenth

PROPOSAL

TO THE TOWN BOARD, TOWN OF RIVERHEAD, 4 WEST 2ND STREET, RIVERHEAD, NEW YORK 11901, ACTING FOR AND ON BEHALF OF THE RIVERHEAD SEWER DISTRICT:

For all work included under the following contract:

BID FOR 203 213 EAST MAIN STREET SEWER IMPROVEMENTS
CONTRACT S: SEWERS
CONTRACT NO. RDSD 2403

Made this ____ day of _____, 202_, by

(BIDDER'S NAME)

BIDDER'S DECLARATION: The undersigned, as Bidder, declares that the only person or persons interested in this bid or proposal as principal or principals is or are named herein; and that no other person than herein named has any interest in this proposal or in the contract proposed to be taken; that this bid or proposal is made without any connections with any other person or persons making a bid or proposal for the same purpose; that the bid or proposal is in all respects fair and without collusion or fraud; that it has examined the site of the work, the Contract and Specifications and the Drawings referred to; and has read the Notice to Bidders, Information for Bidders and General Conditions hereto attached and fully understands all the same; and it proposes and agrees, if this proposal is accepted, it will contract with the TOWN BOARD of the TOWN OF RIVERHEAD in the Contract accompanying this bid to perform all the work required in accordance with the Plans and as mentioned in said foregoing Information for Bidders, General Conditions, Notice to Bidders, Contract and Specifications; and it will accept in full payment therefor the following sums to wit:

NOTE: THIS FORM MUST BE COMPLETED BY BIDDER

PROPOSAL FORM B

TOWN OF RIVERHEAD SEWER DISTRICT
BID FOR 203 213 EAST MAIN STREET SEWER IMPROVEMENTS
CONTRACT No. RDSD 2403
CONTRACT S: SEWERS

All:

The undersigned hereby offers to furnish all labor, equipment, materials, and appurtenances for the **Bid For 203 213 East Main Street Sewer Improvements, Contract S: Sewers** all in accordance with the plans and specifications prepared by H2M architects + engineers.

TOTAL BASE BID:

For all work shown, specified and described in the Contract Documents, for the **Bid For 203 213 East Main Street Sewer Improvements, Contract S: SEWERS**, Contract No. RDSD 2403, Sewer Construction for the Town of Riverhead, on behalf of the Riverhead Sewer District, complete and ready for operation, including the total of the cash allowances of Five Thousand Dollars and Zero Cents (\$5,000.00), as specified in Section 012100 – Allowances, for the Total Base of:

_____ Dollars and _____ Cents.
(IN NUMBERS)

(_____
(IN WORDS)

NOTE: THIS FORM MUST BE COMPLETED BY BIDDER

ALL WORK SHOWN AND SPECIFIED IN THE CONTRACT DOCUMENTS & INCLUDED IN THE BASE BID SHALL BE COMPLETED WITHIN NINETY (90) CONSECUTIVE CALENDAR DAYS (SATURDAYS, SUNDAYS AND HOLIDAYS INCLUDED) STARTING TEN DAYS AFTER THE DATE THE OWNER EXECUTED THE CONTRACT. THE COMPLETION DATE WILL BE SET IN THE NOTICE TO PROCEED.

A NOTICE TO PROCEED WILL BE ISSUED AFTER THE CONTRACT HAS BEEN EXECUTED BY THE OWNER.

NOTICE TO PROCEED DATE WILL BE SCHEDULED TO INITIATE ON THE DATE THE PROPERTY OWNER'S DEWATERING CONTRACTOR INITIATES INSTALLATION OF THE DEWATERING SYSTEM PERTAINING TO THIS CONTRACT WORK. THE CONTRACTOR SHALL INCLUDE UP TO A 6 MONTH DELAY FROM CONTRACT EXECUTION TO ISSUANCE OF THE NOTICE TO PROCEED TO ALLOW FOR THE NYSDEC TO ISSUE THE REQUIRED DEWATERING PERMIT TO THE PROPERTY OWNER.

FAILURE OF THE CONTRACTOR TO COMPLETE ALL WORK SHOWN AND SPECIFIED IN THE CONTRACT DOCUMENTS, BY THE ABOVE SPECIFIED TIME, SHALL SUBJECT HIM/HER TO LIQUIDATED DAMAGES, AS SET FORTH IN ARTICLE 7 OF THE CONTRACT, IN THE SUM OF ONE THOUSAND DOLLARS AND ZERO CENTS (\$1,000.00) PER CALENDAR DAY.

THE TOWN BOARD RESERVES THE RIGHT TO AWARD THIS CONTRACT OR TO REJECT ANY AND ALL BIDS.

EXCESS COSTS FOR ENGINEERING & INSPECTION

SPECIFIC DAMAGES WILL BE ASSESSED AND DEDUCTED FROM AMOUNTS OTHERWISE DUE THE CONTRACTOR FOR ADDITIONAL INSPECTION AND CONTRACT MANAGEMENT TIME REQUIRED BEYOND THE CONTRACT COMPLETION PERIOD SPECIFIED ABOVE. SUCH DEDUCTION SHALL BE NO LESS THAN ONE HUNDRED FIFTY DOLLARS (\$150.00) PER HOUR AND NO MORE THAN ONE TWO HUNDRED FIFTY DOLLARS (\$250.00) PER HOUR IN ACCORDANCE WITH THE ENGINEER'S STANDARD BILLING RATE SCHEDULE IN EFFECT WITH THE OWNER AT THE TIME BASED ON CLASSIFICATION OF STAFF.

IN ADDITION, THE OWNER WILL CHARGE TO THE CONTRACTOR, AND WILL DEDUCT FROM THE PARTIAL AND FINAL PAYMENTS DUE THE CONTRACTOR, ALL EXCESS ENGINEERING,

INSPECTION, LEGAL AND TESTING CHARGES AND EXPENSES INCURRED BY THE DISTRICT AS STIPULATED BELOW:

1. SERVICES AND OTHER SIMILAR CHARGES AS A RESULT OF THE CONTRACTOR'S AND SUBCONTRACTOR'S ERRORS, OMISSIONS OR FAILURE TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
2. SERVICES AND OTHER SIMILAR CHARGES REQUIRED TO EXAMINE AND EVALUATE ANY CHANGES OR ALTERNATES PROPOSED BY THE CONTRACTOR AND WHICH MAY VARY FROM THE CONTRACT DOCUMENTS.
3. SERVICES AND OTHER SIMILAR CHARGES AS A RESULT OF THE CONTRACTOR'S PROPOSED SUBSTITUTION OF MATERIALS, EQUIPMENT OR PRODUCTS WHICH REQUIRE A REDESIGN OF ANY PORTION OF THE PROJECT, AS CONTAINED IN THE CONTRACT DOCUMENTS AT THE TIME OF BID.
4. SERVICES AND OTHER SIMILAR CHARGES AS A RESULT OF THE CONTRACTOR'S PROPOSED SUBSTITUTION OF PRODUCTS WHICH REQUIRE AN ENGINEERING EVALUATION TO DETERMINE IF THE SUBSTITUTED PRODUCT IS EQUAL TO THAT SPECIFIED.
5. SERVICES AND OTHER SIMILAR CHARGES AS A RESULT OF CHANGES BY THE CONTRACTOR TO DIMENSIONS, WEIGHTS, SIZES, VOLTAGES, PHASE, HORSEPOWERS, MATERIALS OF CONSTRUCTION, AND SIMILAR PHYSICAL OR OPERATING CHARACTERISTICS OF THE PRODUCT FURNISHED WHICH REQUIRE REDESIGN OF THE PROJECT IN ANY WAY.
6. SERVICES AND OTHER SIMILAR CHARGES FOR THE REVIEW OF RESUBMISSIONS OF SHOP DRAWINGS THAT HAVE BEEN MARKED AS "NO EXCEPTIONS TAKEN" OR "MAKE CORRECTIONS NOTED".
7. SERVICES AND OTHER SIMILAR CHARGES FOR THE REVIEW OF SHOP DRAWINGS SUBMITTED MORE THAN THREE (3) TIMES FOR THE SAME PRODUCT OR PORTION OF THE WORK.
8. SERVICES AND OTHER SIMILAR CHARGES IN CONNECTION WITH ANY WORK PERFORMED PAST THE SPECIFIED WORKING HOURS WHICH WILL BE INVOICED TO THE OWNER AT 1.15 TIMES THE ENGINEER'S STANDARD HOURLY BILLING RATE.
9. ENGINEERING AND LEGAL SERVICES, AND SIMILAR CHARGES AS A RESULT OF THE CONTRACTOR NOT COMPLETING ALL THE WORK WITHIN THE SPECIFIED COMPLETION TIME WHICH SHALL NOT BE CONSIDERED AS PART OF THE LIQUIDATED DAMAGES SPECIFIED ABOVE.

PROPOSAL FORM B

INSPECTION AND CONTRACT MANAGEMENT TIME REQUIRED BEYOND THE CONTRACT COMPLETION PERIOD SPECIFIED ABOVE. SUCH DEDUCTION SHALL BE NO LESS THAN ONE HUNDRED FIFTY DOLLARS (\$150.00) PER HOUR AND NO MORE THAN ONE TWO HUNDRED FIFTY DOLLARS (\$250.00) PER HOUR IN ACCORDANCE WITH THE ENGINEER'S STANDARD BILLING RATE SCHEDULE IN EFFECT WITH THE OWNER AT THE TIME BASED ON CLASSIFICATION OF STAFF.

BIDDER'S PRINTED NAME & SIGNATURE:

(Print Name)

(Signature)

NOTE: THIS FORM MUST BE COMPLETED BY BIDDER

PROPOSAL FORM B

THE UNDERSIGNED HEREBY ACKNOWLEDGES RECEIPT OF THE FOLLOWING ADDENDA (IF ANY):

<u>Addendum No.</u>	<u>Dated</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Signature of person, firm or corporation making this proposal:

(Contractor)

(Title)

Mail Address: _____

Telephone No.: _____ Dated: _____

The full names and address of all persons interested in the Proposal or principals are as follows:

<u>Name</u>	<u>Address</u>
_____	_____
_____	_____
_____	_____

NOTE: THIS FORM MUST BE COMPLETED BY BIDDER (IF NONE WERE RECEIVED THEN WRITE THE WORD "NONE").

PROPOSAL FORM B

The Town Board reserves the right to award this contract to the lowest qualified bidder and to reject and declare invalid any or all bids deemed not in the best interest of the Town. In awarding this contract, the Town is not bound by the quantities stated in the Bid Form. It is emphasized that the quantities are approximations only. No guarantee is made for any quantities stated nor is a guarantee made as to the total bid. Such total bid is for the purpose of guidance in awarding the contract only. Payment shall be on the basis of actual work done at the bid prices quoted.

On acceptance of this bid, the undersigned binds himself or themselves to enter into a written contract with the Town not later than fourteen (14) days after the date of notice of the acceptance of his bid and to furnish the required security for faithful performance of the terms of said contract and the insurance as required by the Conditions of contract, and to process the work diligently so as to complete all the work required under this contract within the time frame as dictated by the Town Board or their representative.

PROPOSAL CERTIFICATION

THIS BID IS HEREBY SUBMITTED BY:

DATED: _____

NAME OF BIDDER: _____

BIDDER'S ADDRESS: _____

SIGNED BY: _____

PRINTED NAME & TITLE: _____

BIDDER'S TELEPHONE NO.: (DAY): _____

(NIGHT): _____

FAX: _____

FEDERAL ID NO. OR SOCIAL SECURITY No.: _____

NOTE: THIS FORM MUST BE COMPLETED BY BIDDER

PROPOSAL

Enclose certified check or bid bond for five percent (5%) of the bid total as stipulated in the foregoing Information for Bidders.

The Bidder hereby agrees to enter into a Contract within fourteen (14) days (Saturdays and Sundays excepted) after due notice from the Town Board, Town of Riverhead, that the Contract has been awarded to it and is ready for signature; such notice to be given in writing within ninety (90) days of opening of the bids and, on the signing of such Contract by the Bidder, to furnish the indemnifying bonds as provided in the Contract.

The Bidder hereby further agrees that in the event of its failure or refusal to enter into a contract in accordance with this bid within fourteen (14) days after due notice from the Town Board that the Contract has been awarded to it and is ready for signature, as given in accordance with the Information for Bidders and/or its failure to execute and deliver the bond for the full amount of the Contract price, as provided in said Information for Bidders, the Bidder's check or bid bond which is herewith deposited with the Town Board shall (at the option of said Board) become due and payable as ascertained and liquidated damages for such default; otherwise, said check or bid bond will be returned to the undersigned.

The full names and residences of all persons and parties interested in the foregoing bid as principals are as follows:

<u>NAME</u>	<u>ADDRESS</u>
_____	_____
_____	_____
_____	_____

NAME OF BIDDER:

BUSINESS ADDRESS OF BIDDER:

DATED AT: _____ THE _____ DAY OF _____, 202_____

NOTE: THIS FORM MUST BE COMPLETED BY BIDDER

FORM OF BID BOND, PAYMENT BONDS AND PERFORMANCE BONDS

The Form of Bid Bond shall be AIA Document A310.

The Form of Labor and Material Payment Bond shall be AIA Document A311.

The Form of Performance Bond and Payment Bond shall be AIA Document A312.

PROPOSAL

NON-COLLUSIVE BIDDING CERTIFICATE

As per Chapter 751 of the Laws of 1965, an amendment to the General Municipal Law sponsored by the New York State Department of Law, all bids, proposals and contracts awarded or accepted by a municipality must contain a statement of non-collusion. By submission of this bid or proposal, the bidder certifies that:

- (A) This bid or proposal has been independently arrived at without collusion with any other bidder or with any competitor or potential competitor;
- (B) This bid or proposal has not been knowingly disclosed and will not be knowingly disclosed prior to the opening of bids or proposals for this project to any other bidder, competitor or potential competitor;
- (C) No attempt has been or will be made to induce any other person, partnership or corporation to submit or not to submit a bid or proposal;
- (D) The person signing this bid or proposal certifies that he has fully informed himself regarding the accuracy of the statements contained in this certification and under the penalties of perjury, affirms the truth thereof such penalties being applicable to the bidder as well as to the person signing in its behalf;
- (E) That attached hereto (if corporation bidder) is a certified copy of resolution authorizing the execution of this certificate by the signature of this bid or proposal in behalf of the corporate bidder.

Resolved that _____ be authorized
(Name of Corporation)

to sign and submit the bid or proposal of this corporation for the following project:

(Describe Project)

and to submit in such bid or proposal the certificate as to non-collusion required by Section One Hundred Three D (103-D) of the General Municipal Law as the act and deed of such corporation and for any inaccuracies or misstatements in such certificates, this corporate bidder shall be liable under the penalties of perjury.

The following is a true and correct copy of the resolution adopted by:

Corporation at a meeting of its Board of Directors on the _____ day of _____, 202 ____.

(Seal of Corporation)

Secretary

Legal name of person, firm or corporation making this Bid:

PROPOSAL

Dated: _____

(Bidder's Seal)

NOTES:

- (1) Where a bidder is a firm, the bid must be signed in the name of the firm by a member of the firm who must sign his own name immediately thereunder as _____, Partner.
- (2) Where a bidder is a corporation, the bid must be signed in the name of the corporation by a duly authorized officer or agent thereof having knowledge of the matters stated in the bid and such officer or agent shall also subscribe his own name, the office he holds, and the seal of the corporation must be affixed.
- (3) The bid must be sworn to by the person signing it, using one of the appropriate forms of acknowledgement that follow.
- (4) The bidders shall date the Form of Affidavit, fill in all blank spaces and complete the "Questionnaire" which follows as part of the bid.
- (5) In case of any discrepancy in the bidder's extensions or total, the Town Engineer's computation of extensions and totals will govern.

PROPOSAL

FORM OF AFFIDAVIT WHERE BIDDER IS AN INDIVIDUAL

STATE OF _____)

) ss.:

COUNTY OF _____)

_____, being duly sworn, deposes and says: I am the person described in and who executed the foregoing bid and the several matters therein state are in all respects true.

(Signature of person who signed bid)

Subscribed and sworn to before me this
_____ day of _____, 202____.

(Notary Public)

PROPOSAL

FORM OF AFFIDAVIT WHERE BIDDER IS A FIRM

STATE OF _____)

COUNTY OF _____) ss.:
_____)

_____ being duly sworn, deposes and says: I am a member of _____, the firm described in and which executed the foregoing bid. I subscribed the name of the firm thereto on behalf of said firm, and the several matters therein stated in all respects are true.

(Signature of person who signed bid)

Subscribed and sworn to before me:

this _____ day of _____, 202__.

(Notary Public)

PROPOSAL

FORM OF AFFIDAVIT WHERE BIDDER IS A CORPORATION

STATE OF _____)

_____) ss.:
COUNTY OF _____)

_____ being duly sworn, deposes and says: I am the
_____ of _____ the above named
corporation, whose name is subscribed to and which executed the foregoing bid. I reside at
_____, State of
_____. I have knowledge of the several matters therein stated and they are
in all respects true.

(Signature of person who signed bid)

Subscribed and sworn to before me this _____

day of _____, 202____.

(Notary Public)

PROPOSAL

BIDDER MUST SIGN THIS FORM BEFORE A NOTARY PUBLIC

Bid or Contract Number _____

STATE OF _____)

) ss.:

COUNTY OF _____)

That in connection with the above bid or contract of _____ I _____ the *(applicable herein), (an officer or agent of the corporate applicant, namely its _____), swears or affirms under the penalties of perjury, that no other person will have any direct or indirect interest in this proposal except _____ (in case of a corporation, all officers of the corporation and stockholders owning more than 5% of the corporation and stock must be listed. Use separate sheet in necessary.)

That *(none of the officers or stockholders are) related to any officer or employee of the Town of Riverhead except _____.

That there is not any state or local officer or employee or a member of a board of commissioners of a local public authority or other public corporation within the county (exclusive of a volunteer fireman or civil defense volunteer) interested in such application.

(Signature)

Sworn to before me this _____
day of _____, 202____.

(Notary Public)

*Cross out phrase not appropriate.

NOTE: It is not forbidden that individuals working for the Town of Riverhead or other municipality bid on contracts but only that such interest be revealed when they do bid.

NOTE: THIS FORM MUST BE COMPLETED BY BIDDER

QUALIFICATIONS OF BIDDERS

RIVERHEAD SEWER DISTRICT

TOWN OF RIVERHEAD

NEW YORK

The District may make such investigations as the District deems necessary to determine the responsibility of any Bidder or to determine the ability of any Bidder to perform the Work. Bidders shall furnish to the District all information and data required by the District, including complete financial data, within the time and in the form and manner required by the District. The District reserves the right to reject any bid if the evidence required by the District is not submitted as required or if the evidence submitted by or the investigation of any Bidder fails to satisfy the District that the Bidder is responsible, or is able or qualified to carry out the obligations of the Contract or to complete the Work as contemplated.

At the discretion of the District, the Bidder may be required to complete and submit the enclosed New York State Uniform Contracting Questionnaire to assist in determining the Bidder's qualifications. If requested, it shall be submitted within five (5) working days from notice.

The bidder shall complete the following list. The list shall include projects of similar size and nature (i.e. construction and equipment installations type, prime contract dollar amount) and type (i.e. municipal wastewater collection systems and sewers that must be maintained during construction). The list of projects shall demonstrate the Bidder's experience with construction methods, and construction procedures. The list shall only include projects which have been completed by the Bidder as the prime contractor, and which have been in operation for a period of not less than one year. A minimum of five such projects shall be provided. At least one (1) of the listed projects shall demonstrate the Bidder's experience with maintenance and protection of existing water or wastewater collection systems. List this project as project no.1 and describe the sequence used to phase the project.

Project No. 1 (This project must show experience with existing water or wastewater treatment facilities.)

Project Title: _____

Owner: _____

Owner Contact Name and Phone Number: _____

Location: _____

Engineer's Name and Telephone Number: _____

General Description: _____

Contract Amount: _____

QUALIFICATIONS OF BIDDERS

Project No. 2

Project Title: _____

Owner: _____

Owner Contact Name and Phone Number: _____

Location: _____

Engineer's Name and Telephone Number: _____

General Description: _____

Contract Amount: _____

Project No. 3

Project Title: _____

Owner: _____

Owner Contact Name and Phone Number: _____

Location: _____

Engineer's Name and Telephone Number: _____

General Description: _____

Contract Amount: _____

Project No. 4

Project Title: _____

Owner: _____

Owner Contact Name and Phone Number: _____

Location: _____

Engineer's Name and Telephone Number: _____

General Description: _____

Contract Amount: _____

QUALIFICATIONS OF BIDDERS

Project No. 5

Project Title: _____

Owner: _____

Owner Contact Name and Phone Number: _____

Location: _____

Engineer's Name and Telephone Number: _____

General Description: _____

Contract Amount: _____

The Owner reserves the right to reject any and all bids which do not include a completed qualifications section and/or do not meet the necessary qualifications criteria, for both prime contractor and subcontractors, as described within this qualifications section, for construction work to be performed and completed as required by the Contract Documents.

BIDDER

BIDDER NAME: _____

PREPARED BY: _____

SIGNED BY: _____

TITLE: _____

NOTE: THIS FORM MUST BE COMPLETED BY BIDDER

Instructions for New York State Vendor Responsibility Questionnaires

The New York State Vendor Responsibility Questionnaire Is intended to elicit information based on vendor type (For-Profit or Not-for-Profit) and activity (Construction or Non-Construction). The For-Profit Construction (CCA-2) questionnaire follows this page.

Business Entities may print the PDF version of a questionnaire form and complete it annually or may obtain the MS Word version from New York State and complete the questionnaire on a computer. Completing the questionnaire in MS Word allows the questionnaire to be saved on the user's computer and updated in the event that the vendor's information changes.

The person(s) completing the vendor responsibility questionnaire must be knowledgeable about the vendor's business and operations. The certification at the end of each questionnaire must be completed by an owner or officer of the Business Entity and must be notarized to be complete.

Business Entities must answer every question contained in the selected questionnaire. Most questions require "Yes" or "No" answers and request additional information where necessary. For paper submissions, responses that require additional information must include an attachment containing this information. A Business Entity must provide all relevant information which can be obtained within the limits of the law. The Business Entity is not required to provide information regarding a determination or finding made in error which was subsequently corrected.

If the submitting Business Entity is a Joint Venture, one questionnaire must be submitted for the Joint Venture plus each Business Entity comprising the Joint Venture must also submit separate questionnaires.

If the Business Entity uses a Social Security Number (SSN) as its identification number, providing the SSN on the questionnaire is optional. Individuals and Sole Proprietors may use an SSN but are encouraged to obtain and use an Employer Identification Number.

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

You have selected the For-Profit Construction questionnaire, commonly known as the “CCA-2,” which may be printed and completed in this format or, **for your convenience, may be completed online using the [New York State VendRep System](#).**

COMPLETION & CERTIFICATION

The person(s) completing the questionnaire must be knowledgeable about the vendor’s business and operations. An owner or official must certify the questionnaire and the signature must be notarized.

NEW YORK STATE VENDOR IDENTIFICATION NUMBER (VENDOR ID)

The Vendor ID is a ten-digit identifier issued by New York State when the vendor is registered on the Statewide Vendor File. This number must now be included on the questionnaire. If the business entity has not obtained a Vendor ID, contact the IT Service Desk at ITServiceDesk@osc.state.ny.us or call 866-370-4672.

DEFINITIONS

All underlined terms are defined in the “New York State Vendor Responsibility Definitions List,” found at <http://www.osc.state.ny.us/vendrep/documents/questionnaire/definitions.pdf>. These terms may not have their ordinary, common or traditional meanings. Each vendor is strongly encouraged to read the respective definitions for any and all underlined terms. By submitting this questionnaire, the vendor agrees to be bound by the terms as defined in the "New York State Vendor Responsibility Definitions List" existing at the time of certification.

RESPONSES

Every question must be answered. Each response must provide all relevant information which can be obtained within the limits of the law. However, information regarding a determination or finding made in error which was subsequently corrected or overturned, and/or was withdrawn by the issuing government entity, is not required. Individuals and Sole Proprietors may use a Social Security Number but are encouraged to obtain and use a federal Employer Identification Number (EIN).

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

BUSINESS ENTITY INFORMATION

<u>Legal Business Name</u>		<u>EIN</u> _____		
Address of the <u>Principal Place of Business</u> (street, city, state, zip code)		<u>New York State Vendor Identification Number</u>		
		Telephone ext.	Fax	
		Website		
Authorized Contact for this Questionnaire				
Name		Telephone ext.	Fax	
Title		Email		
Additional <u>Business Entity</u> Identities: If applicable, list any other <u>DBA</u> , <u>Trade Name</u> , <u>Former Name</u> , Other Identity, or <u>EIN</u> used in the last five (5) years, the state or county where filed and the status (active or inactive).				
Type	Name	EIN	State or County where filed	Status

I. BUSINESS CHARACTERISTICS

1.0 <u>Business Entity</u> Type – Check appropriate box and provide additional information:			
a) ☐ <u>Corporation</u> (including <u>PC</u>)	Date of Incorporation		
b) ☐ <u>Limited Liability Company</u> (<u>LLC</u> or <u>PLLC</u>)	Date Organized		
c) ☐ <u>Limited Liability Partnership</u>	Date of Registration		
d) ☐ <u>Limited Partnership</u>	Date Established		
e) ☐ <u>General Partnership</u>	Date Established	County (if formed in NYS)	
f) ☐ <u>Sole Proprietor</u>	How many years in business?		
g) ☐ Other	Date Established		
If Other, explain:			
1.1 Was the <u>Business Entity</u> formed in New York State?			☐ Yes ☐ No
If “No,” indicate jurisdiction where the <u>Business Entity</u> was formed:			
☐ United States	State		
☐ Other	Country		

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

I. BUSINESS CHARACTERISTICS			
1.2 Is the <u>Legal Business Entity</u> publicly traded?			☐ Yes ☐ No
If "Yes," provide the <u>CIK code</u> or Ticker Symbol:			
1.3 Is the <u>Business Entity</u> currently <u>registered to do business in New York State</u> ?			☐ Yes ☐ No
<i>Note: Select "Not Required" if the Business Entity is a Sole Proprietor or General Partnership</i>			☐ Not Required
If "No," explain why the <u>Business Entity</u> is not required to be <u>registered to do business in New York State</u> :			
1.4 Is the responding <u>Business Entity</u> a <u>Joint Venture</u> ? Note: If the submitting <u>Business Entity</u> is a <u>Joint Venture</u> , also submit a separate questionnaire for each <u>Business Entity</u> comprising the <u>Joint Venture</u> .			☐ Yes ☐ No
1.5 If the <u>Business Entity's Principal Place of Business</u> is not in New York State, does the <u>Business Entity</u> maintain an office in New York State?			☐ Yes ☐ No
<i>(Select "N/A" if <u>Principal Place of Business</u> is in New York State.)</i>			☐ N/A
If "Yes," provide the address and telephone number for one office located in New York State.			
1.6 Is the Business Entity a New York State certified <u>Minority-Owned Business Enterprise</u> , or <u>Women-Owned Business Enterprise</u> , or <u>New York State Small Business</u> , or federally certified <u>Disadvantaged Business Enterprise</u> ?			☐ Yes ☐ No
If "Yes," check all that apply: ☐ New York State certified <u>Minority-Owned Business Enterprise</u> (MBE) ☐ New York State certified <u>Women-Owned Business Enterprise</u> (WBE) ☐ <u>New York State Small Business</u> ☐ Federally certified <u>Disadvantaged Business Enterprise</u> (DBE)			
1.7 Identify each person or business entity that is, or has been within the past five (5) years, <u>Principal Owner</u> of 5.0% or more of the firm's shares; a Business Entity Official; or one of the five largest shareholders, if applicable. <i>(Attach additional pages if necessary.)</i> <u>Joint Ventures</u> : Provide information for all firms involved.			
Name <i>(For each person, include middle initial)</i>	Title	Percentage of ownership (Enter 0%, if not applicable)	Employment status with the firm
			☐ Current ☐ Former
			☐ Current ☐ Former
			☐ Current ☐ Former
			☐ Current ☐ Former

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

II. AFFILIATE and JOINT VENTURE RELATIONSHIPS		
2.0 Are there any other <u>construction</u> -related firms in which, now or in the past five years, the submitting <u>Business Entity</u> or any of the individuals or business entities listed in question 1.7 either owned or owns 5.0% or more of the shares of, or was or is one of the five largest shareholders or a director, officer, partner or proprietor of said other firm? <i>(Attach additional pages if necessary.)</i>		☐ Yes ☐ No
Firm/Company Name	Firm/Company EIN (If available)	Firm/Company's Primary Business Activity
Firm/Company Address		
Explain relationship with the firm and indicate percent of ownership, if applicable (enter N/A, if not applicable):		
Are there any shareholders, directors, officers, owners, partners or proprietors that the submitting <u>Business Entity</u> has in common with this firm?		☐ Yes ☐ No
Individual's Name <i>(Include middle initial)</i>	Position/Title with Firm/Company	
2.1 Does the <u>Business Entity</u> have any <u>construction</u> -related <u>affiliates</u> not identified in the response to question 2.0 above? <i>(Attach additional pages if necessary.)</i>		☐ Yes ☐ No
Affiliate Name	Affiliate EIN (If available)	Affiliate's Primary Business Activity
Affiliate Address		
Explain relationship with the affiliate and indicate percent of ownership, if applicable <i>(enter N/A, if not applicable)</i> :		
Are there any shareholders, directors, officers, owners, partners or proprietors that the submitting Business Entity has in common with this affiliate?		☐ Yes ☐ No
Individual's Name <i>(Include middle initial)</i>	Position/Title with Firm/Company	
2.2 Has the <u>Business Entity</u> participated in any <u>construction-related Joint Ventures</u> within the past three (3) years? <i>(Attach additional pages if necessary.)</i>		☐ Yes ☐ No
Joint Venture Name	Joint Venture EIN (If available)	Identify parties to the Joint Venture

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

III. CONTRACT HISTORY

3.0 Has the Business Entity completed any construction contracts? ☐ Yes ☐ No

If "Yes," list the ten most recent construction contracts the Business Entity has completed using Attachment A – Completed Construction Contracts, found at www.osc.state.ny.us/vendrep/documents/questionnaire/ac3294s.doc.

If less than ten, include most recent subcontracts on projects up to that number.

3.1 Does the Business Entity currently have uncompleted construction contracts? ☐ Yes ☐ No

If "Yes," list all current uncompleted construction contracts by using Attachment B – Uncompleted Construction Contracts, found at www.osc.state.ny.us/vendrep/documents/questionnaire/ac3295s.doc.

Note: Ongoing projects must be included.

IV. INTEGRITY – CONTRACT BIDDING

Within the past five (5) years, has the Business Entity, an affiliate, or any predecessor company or entity:

4.0 Been suspended or debarred from any government contracting process or been disqualified on any government procurement? ☐ Yes ☐ No

4.1 Been subject to a denial or revocation of a government prequalification? ☐ Yes ☐ No

4.2 Had any bid rejected by a government entity for lack of qualifications, responsibility or because of the submission of an informal, non-responsive or incomplete bid? ☐ Yes ☐ No

4.3 Had a proposed subcontract rejected by a government entity for lack of qualifications, responsibility or because of the submission of an informal, non-responsive or incomplete bid? ☐ Yes ☐ No

4.4 Had a low bid rejected on a government contract for failure to make good faith efforts on any Minority-Owned Business Enterprise, Women-Owned Business Enterprise or Disadvantaged Business Enterprise goal or statutory affirmative action requirements on a previously held contract? ☐ Yes ☐ No

4.5 Agreed to a voluntary exclusion from bidding/contracting with a government entity? ☐ Yes ☐ No

4.6 Initiated a request to withdraw a bid submitted to a government entity or made any claim of an error on a bid submitted to a government entity? ☐ Yes ☐ No

For each "Yes," provide an explanation of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, the government entity involved, project(s), relevant dates, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer(s) below or attach additional sheets with numbered responses.

V. INTEGRITY – CONTRACT AWARD

Within the past five (5) years, has the Business Entity, an affiliate, or any predecessor company or entity:

5.0 Defaulted on or been suspended, cancelled or terminated for cause on any contract? ☐ Yes ☐ No

5.1 Been subject to an administrative proceeding or civil action seeking specific performance or restitution (except any disputed work proceeding) in connection with any government contract? ☐ Yes ☐ No

5.2 Entered into a formal monitoring agreement, consent decree or stipulation settlement as specified by, or agreed to with, any government entity? ☐ Yes ☐ No

5.3 Had its surety called upon to complete any contract whether government or private sector? ☐ Yes ☐ No

5.4 Forfeited all or part of a standby letter of credit in connection with any government contract? ☐ Yes ☐ No

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

V. INTEGRITY – CONTRACT AWARD

Within the past five (5) years, has the Business Entity, an affiliate, or any predecessor company or entity:

For each “Yes,” provide an explanation of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, the government entity/owners involved, project(s), contract number(s), relevant dates, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer(s) below or attach additional sheets with numbered responses.

VI. CERTIFICATIONS/LICENSES

Within the past five (5) years, has the Business Entity, an affiliate, or any predecessor company or entity:

6.0 Had a revocation or <u>suspension</u> of any business or professional permit and/or license?	☐ Yes ☐ No
--	--

6.1 Had a denial, decertification, revocation or forfeiture of New York State certification of <u>Minority-Owned Business Enterprise</u> , <u>Women-Owned Business Enterprise</u> or a federal certification of <u>Disadvantaged Business Enterprise</u> status, for other than a change of ownership?	☐ Yes ☐ No
--	--

For each “Yes,” provide an explanation of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, the government entity involved, relevant dates, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer(s) below or attach additional sheets with numbered responses.

VII. LEGAL PROCEEDINGS/GOVERNMENT INVESTIGATIONS

Within the past five (5) years, has the Business Entity, an affiliate, or any predecessor company or entity:

7.0 Been the subject of a criminal <u>investigation</u> , whether open or closed, or an indictment for any business-related conduct constituting a crime under local, state or <u>federal</u> law?	☐ Yes ☐ No
--	--

7.1 Been the subject of:	
(i.) An indictment, grant of immunity, <u>judgment</u> or conviction (including entering into a plea bargain) for conduct constituting a crime; or	☐ Yes ☐ No
(ii.) Any criminal <u>investigation</u> , felony indictment or conviction concerning the formation of, or any business association with, an allegedly false or fraudulent <u>Minority-Owned Business Enterprise</u> , <u>Women-Owned Business Enterprise</u> , or a <u>Disadvantaged Business Enterprise</u> ?	☐ Yes ☐ No

7.2 Received any <u>OSHA</u> citation, which resulted in a final determination classified as <u>serious</u> or <u>willful</u> ?	☐ Yes ☐ No
---	--

7.3 Had a <u>government entity</u> find a willful prevailing wage or supplemental payment violation?	☐ Yes ☐ No
--	--

7.4 Had a New York State Labor Law violation deemed willful?	☐ Yes ☐ No
--	--

7.5 Entered into a consent order with the New York State Department of Environmental Conservation, or a <u>federal</u> , state or local government enforcement determination involving a violation of <u>federal</u> , state or local environmental laws?	☐ Yes ☐ No
---	--

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

VII. LEGAL PROCEEDINGS/GOVERNMENT INVESTIGATIONS

Within the past five (5) years, has the Business Entity, an affiliate, or any predecessor company or entity:

7.6 Other than previously disclosed, been the subject of any <u>citations</u>, notices or violation orders; a pending administrative hearing, proceeding or determination of a violation of: • <u>Federal</u>, state or local health laws, rules or regulations; • <u>Federal</u>, state or local environmental laws, rules or regulations; • Unemployment insurance or workers compensation coverage or <u>claim</u> requirements; • Any labor law or regulation, which was deemed willful; • Employee Retirement Income Security Act (ERISA); • <u>Federal</u>, state or local human rights laws; • <u>Federal</u>, state or local security laws?	☐ Yes ☐ No
--	--

For each "Yes," provide an explanation of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, the government entity involved, relevant dates, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer(s) below or attach additional sheets with numbered responses.

Note: Information regarding a determination or finding made in error, which was subsequently corrected or overturned, and/or was withdrawn by the issuing government entity, is not required.

VIII. LEADERSHIP INTEGRITY

If the Business Entity is a Joint Venture Entity, answer "N/A - Not Applicable" to questions in this section.

Within the past five (5) years has any individual previously identified or any individual currently or formerly having the authority to sign, execute or approve bids, proposals, contracts or supporting documentation on behalf of the Business Entity with any government entity been:

8.0 <u>Sanctioned</u> relative to any business or professional permit and/or license?	☐ Yes ☐ No ☐ N/A
8.1 <u>Suspended</u>, <u>debarred</u> or <u>disqualified</u> from any <u>government contracting process</u>?	☐ Yes ☐ No ☐ N/A
8.2 The subject of a criminal <u>investigation</u>, whether open or closed, or an indictment for any business-related conduct constituting a crime under local, state or <u>federal</u> law?	☐ Yes ☐ No ☐ N/A
8.3 Charged with a misdemeanor or felony, indicted, granted immunity, convicted of a crime or subject to a judgment for: (i.) Any business-related activity, including but not limited to fraud, coercion, extortion, bribe or bribe-receiving, giving or accepting unlawful gratuities, immigration or tax fraud, racketeering, mail fraud, wire fraud, price-fixing or collusive bidding; or (ii.) Any crime, whether or not business-related, the underlying conduct of which related to truthfulness, including but not limited to the filing of false documents or false sworn statements, perjury or larceny	☐ Yes ☐ No ☐ N/A

For each "Yes," provide an explanation of the issue(s), the individual involved, the relationship to the submitting Business Entity, the government entity involved, relevant dates, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer(s) below or attach additional sheets with numbered responses.

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

IX. FINANCIAL AND ORGANIZATIONAL CAPACITY

9.0 Within the past five (5) years, has the Business Entity or any affiliate received any formal unsatisfactory performance assessment(s) from any government entity on any contract? ☐ Yes ☐ No

If "Yes," provide an explanation of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, the government entity involved, relevant dates, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer below or attach additional sheets with numbered responses.

9.1 Within the past five (5) years, has the Business Entity or any affiliate had any liquidated damages assessed over \$25,000? ☐ Yes ☐ No

If "Yes," provide an explanation of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, relevant dates, the contracting party involved, the amount assessed and the current status of the issue(s). Provide answer below or attach additional sheets with numbered responses.

9.2 Within the past five (5) years, has the Business Entity or any affiliate had any liens, claims or judgments over \$25,000 filed against the Business Entity which remain undischarged or were unsatisfied for more than 90 days? (Note: Including but not limited to tax warrants or liens. Do not include UCC filings.) ☐ Yes ☐ No

If "Yes," provide an explanation of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, relevant dates, the Lien holder or Claimants' name(s), the amount of the lien(s) and the current status of the issue(s). Provide answer below or attach additional sheets with numbered responses.

9.3 In the last seven (7) years, has the Business Entity or any affiliate initiated or been the subject of any bankruptcy proceedings, whether or not closed, or is any bankruptcy proceeding pending? ☐ Yes ☐ No

If "Yes," provide the Business Entity involved, the relationship to the submitting Business Entity, the bankruptcy chapter number, the court name and the docket number. Indicate the current status of the proceedings as "Initiated," "Pending" or "Closed." Provide answer below or attach additional sheets with numbered responses.

9.4 What is the Business Entity's Bonding Capacity?

a. Single Project

b. Aggregate (All Projects)

9.5 List Business Entity's Gross Sales for the previous three (3) Fiscal Years:

1st Year (Indicate year)
Gross Sales

2nd Year (Indicate year)
Gross Sales

3rd Year (Indicate year)
Gross Sales

9.6 List Business Entity's Average Backlog for the previous three (3) fiscal years:
(Estimated total value of uncompleted work on outstanding contracts)

1st Year (Indicate year)
Amount

2nd Year (Indicate year)
Amount

3rd Year (Indicate year)
Amount

9.7 Attach Business Entity's most recent annual financial statement and accompanying notes or complete Attachment C – Financial Information, found at www.osc.state.ny.us/vendrep/documents/questionnaire/ac3296s.xls.
(This information must be attached.)

**NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT CONSTRUCTION (CCA-2)**

X. FREEDOM OF INFORMATION LAW (FOIL)

10.0 Indicate whether any information provided herein is believed to be exempt from disclosure under the Freedom of Information Law (FOIL).
Note: A determination of whether such information is exempt from FOIL will be made at the time of any request for disclosure under FOIL. Attach additional pages if necessary.

☐ Yes ☐ No

If "Yes," indicate the question number(s) and explain the basis for the claim.

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

Certification

The undersigned: (1) recognizes that this questionnaire is submitted for the express purpose of assisting New York State government entities (including the Office of the State Comptroller (OSC)) in making responsibility determinations regarding award or approval of a contract or subcontract and that such government entities will rely on information disclosed in the questionnaire in making responsibility determinations; (2) acknowledges that the New York State government entities and OSC may, in their discretion, by means which they may choose, verify the truth and accuracy of all statements made herein; and (3) acknowledges that intentional submission of false or misleading information may result in criminal penalties under State and/or Federal Law, as well as a finding of non-responsibility, contract suspension or contract termination.

The undersigned certifies that he/she:

- is knowledgeable about the submitting Business Entity's business and operations;
- has read and understands all of the questions contained in the questionnaire;
- has not altered the content of the questionnaire in any manner;
- has reviewed and/or supplied full and complete responses to each question;
- to the best of his/her knowledge, information and belief, confirms that the Business Entity's responses are true, accurate and complete, including all attachments, if applicable;
- understands that New York State government entities will rely on the information disclosed in the questionnaire when entering into a contract with the Business Entity; and
- is under an obligation to update the information provided herein to include any material changes to the Business Entity's responses at the time of bid/proposal submission through the contract award notification, and may be required to update the information at the request of the New York State government entities or OSC prior to the award and/or approval of a contract, or during the term of the contract.

Signature of Owner/Official _____

Printed Name of Signatory _____

Title _____

Name of Business _____

Address _____

City, State, Zip _____

Sworn to before me this _____ day of _____, 20____;

_____ Notary Public

+ + NO TEXT ON THIS PAGE + +

LIST OF SUBCONTRACTORS

RIVERHEAD SEWER DISTRICT

TOWN OF RIVERHEAD

NEW YORK

The Bidder shall list the subcontractors, if any, to be used for this project. Provide the required information for each proposed subcontractor. Make appropriate copies of this form should the Bidder propose more than five (5) subcontractors. List at least five projects for each subcontractor that demonstrates the subcontractor's qualifications to perform the work of the project. The projects shall be similar in size and complexity and have been completed within the last five (5) years by the subcontractor.

Subcontractor Name: _____

Type of Work: _____

<u>Owner</u>	<u>Contact Name</u>	<u>Phone Number</u>	<u>Location</u>	<u>Contract Amount</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
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LIST OF SUBCONTRACTORS

Subcontractor Name: _____

Type of Work: _____

<u>Owner</u>	<u>Contact Name</u>	<u>Phone Number</u>	<u>Location</u>	<u>Contract Amount</u>
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Subcontractor Name: _____

Type of Work: _____

<u>Owner</u>	<u>Contact Name</u>	<u>Phone Number</u>	<u>Location</u>	<u>Contract Amount</u>
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LIST OF SUBCONTRACTORS

Subcontractor Name: _____

Type of Work: _____

<u>Owner</u>	<u>Contact Name</u>	<u>Phone Number</u>	<u>Location</u>	<u>Contract Amount</u>

Subcontractor Name: _____

Type of Work: _____

<u>Owner</u>	<u>Contact Name</u>	<u>Phone Number</u>	<u>Location</u>	<u>Contract Amount</u>

NOTE: THIS FORM MUST BE COMPLETED BY BIDDER

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CONDITIONS OF CONTRACT

1. CONTRACT DOCUMENTS AND DEFINITIONS

The Notice to Bidders, Instructions to Bidders, Proposal Form, Form of Bond, Conditions of Contract, General Conditions, Specifications, Form of Contract, Construction Drawings, together with any Addenda, shall form part of this Contract, and the provisions thereof shall be as binding upon the parties hereto, as if they were herein fully set forth. The table of contents, titles, heading, headlines, and marginal notes contained herein are solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or cast light upon the interpretation of the provisions to which they refer. Whenever the term "Contract Documents" is used, it shall mean and include the Notice to Bidders, Instructions to Bidders, Proposal Form, Form of Bond, Conditions of Contract, General Conditions, Plans & Specifications, Form of Contract and any Addenda. In case of any conflict or inconsistency between the provisions of the contract and those of the Specifications, the provisions of this contract shall govern.

Extra Work: The term "extra work" as used herein, refers to and includes all work required by the Town, which in the judgment of the Town Engineer involves changes in or additions to work required by the Specifications and any Addenda in their present form and which is not covered by the price in the Form of Bid.

Subcontractor: The term "subcontractor" shall mean any person, firm, or corporation supplying labor and material for work at the site of the project but not including the parties to this contract.

Notice: The term "notice" as used herein, shall mean and include written notice. Written notice shall be deemed to have been duly served when delivered to, or at last known business address of, the person, firm or corporation for who intended, or his, their, or its duly authorized agents, representatives, or officer, or when enclosed in a postage prepaid wrapper or envelope addressed to such person, firm or corporation at his, their or its last known business address and deposited in a United States mailbox.

Directed, Required, Approved, Acceptable: Whenever the Contract Documents refer to the work or its performance, "directed", "required", "permitted", imply the direction, requirement, permission, order, designation or prescription of the Town Engineer, or his representative, and "approved", "satisfied", or "satisfactory", "in the judgment of", and words of like import, shall mean approved, or acceptable to, or satisfactory to, or in the judgment of the Town Engineer, or his representative.

2. SCOPE OF SERVICES

The contractor will furnish all labor, materials, suppliers, equipment and other facilities necessary or proper for, or incidental to, the work contemplated by this contract as required by, and in strict accordance with the applicable Plans and Specifications and Addenda prepared by the Town Engineer and/or required by, and in strict accordance with, such changes as are ordered and approved pursuant to this contract, and will perform all other obligations imposed on him by this contract. It is specifically understood that this contract does not guarantee any minimum or maximum quantities of work. Quantities will be as ordered by the Town from time to time, and unit bid prices will govern. The quantities in the proposal are for bidding purposes only.

3. COMPENSATION TO BE PAID TO THE CONTRACTOR

(A) Agreed Prices: It is understood and agreed that the contractor will accept as payment in full the summation of the products of the actual quantities in place upon the completion of the work, as determined by the Town Engineer's measurements, by the unit prices bid, no allowances being made for anticipated profit or for reasons of variations from the estimated quantities set forth in the Form of Bid.

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(B) Extra Work: The town may, at any time, by a written order and without notice to the sureties, require the performance of such extra work or changes in the work as it may find necessary or desirable. The amount of compensation to be paid to the contract for any extra work, as so ordered, shall be determined as follows:

1. By such applicable unit prices, if any, as set forth in the contract; or
2. If no such unit prices are set forth, then by unit price or by a lump sum mutually agreed upon by the town and the contractor; and
3. If no such unit prices are set forth and if the parties cannot agree upon unit prices or a lump sum; then by actual net cost in money to the contractor of the materials, permits, wages of applied labor, premiums for Worker's Compensation Insurance, payroll taxes required by law, rental for plant and equipment used (excluding small tools) to which total cost will be added twenty (20) percent as full compensation for all other items of profit costs and expenses, including administration, overhead, superintendency, insurance, insurance other than Workers' Compensation Insurance, materials used in temporary structures, allowances made by the contractor to subcontractors, additional premiums upon the performance bond of the contractor and the use of small tools.

4. TIME OF ESSENCE

Inasmuch as the provisions of the contract relating to the time of performance and completion of the work are for the purpose of enabling the town to proceed with the construction of a public improvement in accordance with a predetermined program, such provisions are of the essence of this contract.

5. TIME OF COMPLETION

The town shall assign a construction schedule indicating a start date and a completion date. The contractor shall have a minimum of fourteen (14) days from the date of receipt of construction schedule to the earliest start date on the assigned construction schedule. If said schedule is not acceptable to the contractor, the contractor shall notify the town in writing, postmarked within three (3) working days from date of receipt of construction schedule. This notification shall include an alternative construction schedule. The alternative construction schedule completion date shall not exceed twenty-eight (28) calendar days from the original completion date assigned by the town. Failure to comply with time of completion shall constitute liquidated damages and termination of primary contractor.

6. LIQUIDATED DAMAGES

The time limit being essential to and of the essence of this contract, the primary contractor hereby agrees that the Town shall be and is hereby authorized to deduct and retain out of the money which may be due or may become due to said contractor under this agreement, the sum of the cost of completing the work by the secondary contractor, including overhead charges, services, inspector's wages, and interest on the money invested that the Town will suffer by reason of such default. The Town shall have the right to extend the time for the completion of said work.

Additional liquidated damages shall be applied as detail in the Instruction to Bidder Section 21 for delays of the contract work associated to the operation of the dewatering system being provided by others.

7. TERMINATION OF PRIMARY CONTRACTOR

Termination of primary contractor shall include all work in progress and pending. All existing and pending purchase orders pertaining to work issued through the Town-wide Construction Contract shall be hereby considered void. All items previously awarded to terminated contractor shall be hereby awarded to corresponding secondary contractors. Termination of primary contractor shall extend the duration of the

CONDITIONS OF CONTRACT

contract. At the discretion of the Town of Riverhead, termination of contractor shall warrant disqualification from awarding specific items or all items in succeeding Town-wide construction contracts Capital Improvement Projects, etc.

8. EXTENSIONS OF TIME. NO WAIVER.

If the contractor shall be delayed in the completion of his work by reason or by reasons of unforeseeable causes beyond his control and without his fault or negligence, including but not restricted to; acts of God, the public enemy, fires, floods, epidemics, quarantine restrictions, strikes, riots, civil commotion or freight embargoes, the period herein specified for completion of his work shall be extended by such time as shall be fixed by the Town.

No such extension of time shall be considered a waiver by the Town of its right to terminate the contract for abandonment or delay by the contractor as hereinafter provided, or relive the contractor from full responsibility for performance of his obligations hereunder.

9. WEATHER

During unsuitable weather, all work must stop when such work would be subject to injury and the contractor shall transfer his men and materials to those parts of the work where weather conditions will not have any effect on the workmanship to any damages on account of such damages or suspension, and he must protect any work that might be injured by the elements and make good any work that is injured.

10. CONTRACT SECURITY

The contractor shall furnish, at the request of the Town, a Performance Bond equal to 100% of the estimated value of individual projects completed under this contract at the discretion of the Town Engineer. Each individual project to be completed under the contract will be evaluated by the Town Engineer or his representative to determine the need for bonding. If bonding is deemed necessary, the contractor will be required to submit documentation confirming the actual cost of such bonding to the Town Engineer for approval. Upon approval, the Town will reimburse the contractor for 100% of the cost of any required bonding. The contractor is advised not to include the cost of bonding in bid submittals.

Additional or Substitute Bond: If at any time the Town shall be or become dissatisfied with any surety or sureties then upon the Performance Bond, or if for any other reason such bond shall cease to be adequate security to the Town, the contractor shall within five (5) days after notice from the Town to do so, substitute an acceptable bond in such form and sum and signed by such other surety as may be satisfactory to the Town. The premiums on such bonds shall be made until the new surety shall have been qualified.

11. LAWS AND ORDINANCES

In the execution of the contract, the contractor will be required to observe and obey all federal, state, county and local laws, ordinances, codes and regulations relating to the performance of the contract including but not limiting labor employed thereon, materials supplied, obstructing streets and highways, maintaining signals, storing, handling and use of explosives and all other general ordinances and state statutes affecting him or his employees of his work hereunder in his relations with the municipality or any other persons, and also all laws, codes, ordinances controlling or limiting the contractor while engaged in executing the work under the contract.

As a condition of the contract, the contractor shall and does hereby agree to comply with all requirements of the Labor Laws of the State of New York.

CONDITIONS OF CONTRACT

The contractor shall comply with the provisions of Sections 291-299 of the Executive Law and Civil Rights Law, shall furnish all information and reports deemed necessary by the State Commission for Human Rights, the Attorney General and the Industrial Commissioner for purposes of investigation to ascertain compliance with such sections of the Executive Law and Civil Rights Law.

The contract may be forthwith canceled, terminated or suspended, in whole or in part, by the contracting agency upon the basis of a finding made by the State Commissioner for Human Rights that the contractor has not complied with these laws.

The contract hereby expressly agrees to comply with all the provisions of the Labor Law and any and all amendments thereto, insofar as the same are applicable to the contract. The Labor Law, as amended, provides that no laborer, worker or mechanic in the employ of the contractor, subcontractor or other person doing or contracting to do the whole or a part of the work contemplated by this contract, shall be permitted or required to work more than eight (8) hours in any one (1) calendar day, except in cases of extraordinary emergency caused by fire, flood or danger to life or property; that no such person shall be employed more than eight (8) hours in any day or more than five (5) days in any week except in such emergency; that the wages to be paid for a legal day's work as herein before defined, to laborers, workmen or mechanics upon the work called for under this contract or upon any materials used upon, or in connection therewith, shall not be less than the prevailing rate for a day's work in the same trade or occupation in the locality within the State where such work is to be done and each laborer, worker or mechanic employed by the contractor, subcontractor or other person about or upon the work shall be paid the wages herein provided; that employees engaged in the construction maintenance, and repair of highways and in water works construction outside the limits of cities and villages are no longer exempt from the provisions of the labor Law which require that payment of the prevailing rate of wages and the eight (8) hour day.

Section 222 of the Labor Law, as amended by Chapters 556 and 557 of the Laws of 1933, provides that preference in employment shall be given to citizens of the State of New York who have been residents of Suffolk County for at least six (6) consecutive months immediately prior to the commencement of their employment. Each person so employed shall furnish satisfactory proof of residence in accordance with rules adopted by the Industrial Commissioner. Person other than citizens of the State of New York shall be employed only when such citizens are not available. Section 222 further provides that upon the demand of the State Industrial Commissioners, the contractor shall furnish a list of names and addresses of all his subcontractors and further provides that a violation of this section shall constitute a misdemeanor and shall be punishable by a fine of not less than Fifty Dollars (\$50.00) nor more than Five Hundred Dollars (\$500.00) or by imprisonment for not less than thirty nor more than ninety days, or both fine and imprisonment.

Section 220-A of the Labor Law, as amended by Chapter 472 of the Laws of 1932, provides that before payment is made by or on behalf of the State or any city, county, town or village or other civil division of the state of any sums due on account of a contract for a public improvement, it is the duty of the comptroller or the financial officer of the municipal corporation to require the contractor and each and every subcontractor to file a certified statement in writing, in satisfactory form, certifying to the amount then due and owing to any and all laborers for daily or weekly wages on account of labor performed upon the work of the contractor, setting forth herein the names of the persons whose wages are unpaid and the amount due each respectively.

Section 220-B of the Labor Law, as so amended, provides that any interested person who shall have previously filed a protest in writing objecting to the amounts due or to become due to him for daily or weekly wages for labor performed on the public improvement for which the contract was entered into, or if for any reason, it may be deemed advisable, the comptroller of the state or financial officer of the

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municipal corporation may deduct from the whole amount of any payment on account thereof of the sums or sum admitted by any contractor or subcontractor in such statement or statements so filed to be due and owing by him on account of labor performed and may withhold the amount so deducted for the benefit of the laborers for daily work, weekly wages, whose wages are unpaid as shown by the verified statements filed by any contractor or subcontractor and may pay directly to any person the amount or amounts so shown to be due for such wages.

Section 220-C of the Labor Law, as so amended, provides the penalty for making of a false oath or verification.

Section 220-D of the Labor Law provides that the advertised specifications for every contract for the construction, reconstruction, maintenance and/or repair of highways to which the state, county, town and/or village is a party shall contain a provision stating the minimum rate of hourly wage that can be paid, as shall be designated by the Industrial Commissioner, to the laborers employed in the performance of the contract whether by the contractor, subcontractor or other person doing or contracting to do the whole or part of the work completed by the laborers shall be paid not less than such hourly minimum rate of wage. Any person or corporation that willfully pays, after entering into such contract, less than such stipulated minimum hourly wage scale shall be guilty of a misdemeanor and upon conviction, shall be punished for a first offense by a fine of Five Hundred Dollars (\$500.00) or by imprisonment; for a second offense by a fine of One Thousand Dollars (\$1,000.00) and in addition thereto, the contract on which the violation has occurred shall be forfeited, and no such person or corporation shall be entitled to receive any sum nor shall any officer, agent or employee of the state pay the same or authorize its payment from the funds under his charge or control to any person or corporation for work done upon any contract, on which the contractor has been convicted or a second offense in violation of the provisions of this section.

The minimum wage rates established by the Industrial Commissioner, State of New York, for this contract are set forth herein above as part of "Instructions to Bidders, Section 21 "NYS Wage Rates"

12. QUALIFICATIONS FOR EMPLOYMENT

No person under the age of sixteen (16) years and no person currently serving sentence in a penal or correctional institution shall be employed to perform any work on the project under this contract. No person whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health or safety of others, shall be employed to perform any work on this project; provided, however, that such restrictions shall not operate against the employment of physically handicapped persons, otherwise employable, where each person may be safely assigned to work which they can ably perform.

13. NONDISCRIMINATION

There shall be no discrimination because of race, creed, or color in the employment of persons for work under this contract, whether performed by the contractor or any subcontractor. Neither shall the contractor or subcontractor or any person acting on behalf of the contractor or subcontractor discriminate in any manner against or intimidate any employee hired for the performance of work under this contract on account of race, creed, or color.

14. PAYMENTS OF EMPLOYEES

The contractor and each of his subcontractors shall pay each of his employees engaged in work on the project under this contract in full (less deductions made mandatory by law) not less often than once each week. Certified payrolls shall be submitted to the Town Engineer before payment to the contractor is processed. Affidavit attesting to payment or amount owed to employees shall be submitted before payment to contractor is processed.

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15. ESTIMATES AND PAYMENTS

Upon successful completion of all work, the contractor shall submit an invoice to the Town Engineer for approval. Upon approval by the Town Engineer, payment will be made to the contractor within thirty (30) calendar days provided the payment request is correct and complete.

- (A) Monthly: At the end of each calendar month during the progress of the work, the Town Engineer shall make an approximate estimate of the work satisfactorily completed, based upon the prices set forth in the Form of Bid. In consideration of the work completed, the Town will pay or cause to be paid to the contractor the amount estimated by the Town Engineer as due him less five (5%) percent.

The making of any such estimate or payment made thereon shall not be taken or construed as an acceptance by the Town of any work so estimated and paid for. The five (5%) percent of the amount of the monthly estimate remaining unpaid will be retained by the Town as a guarantee that the contractor will faithfully and completely fulfill all obligations imposed by the contract and specifications, and against any damages caused the Town by reason of any failure on the part of the contractor to fulfill all conditions and obligations herein contained.

- (B) Final Estimate: One month after the completion and acceptance of the work specified and contracted for, the Town Engineer will make a final estimate of all the work done. Thereafter, the Town will pay the full amount, less prior payments, less any amounts retained to complete the work according to the provisions of the specifications, less any money paid by the Town by reasons of said contractor having failed to carry out faithfully and completely all the obligations and requirements herein contained. Upon final settlement, according to the conditions herein specified and not until such settlement shall have been made, will the contractor be relieved from the obligations assumed in the contract.
- (C) Measurement for Payment: The Town Engineer shall make due measurement of work completed during the progress of the work and his estimate shall be final and conclusive evidence of the amounts of work performed by the contractor under and by virtue of this agreement and shall be taken as full measure of compensation to be received by the contractor.
- (D) No payments will be made for materials delivered to the site which have not been incorporated into the work.

16. ACCEPTANCE OF FINAL PAYMENT CONSTITUTES RELEASE

The acceptance by the contractor of final payment shall be, and shall operate as a release to the Town from all claims and all liabilities to the contractor for all the things done or furnished in connection with this work and for every act and neglect of the Town and others relating to or arising out of, this work, excepting to the contractor's claims for interest upon the final payment, if this payment be improperly delayed. No payment, however, final or otherwise, shall operate to release the contractor or his sureties from any obligations under this contract or the performance bond or maintenance bond.

17. CONSTRUCTION REPORTS

The contractor shall submit to the Town Engineer prior to commencing any work under this contract, a detailed schedule and plan of operations indicating the manner in which the contractor proposes to prosecute the work and a time schedule therefor. Such schedules are not intended to bind the contractor to a predetermined plan or procedure, but rather to enable the Town Engineer to coordinate the work of

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the contractor with work required of and to be performed by others. The detailed schedule shall include a list of the subcontractors and material suppliers he proposes to use on the work.

18. INSPECTION AND TESTS

All material and workmanship shall be subject to inspection, examination and test by the Town Engineer, or his representative, at any time during the construction and at any and all places where manufacturing of materials used and/or construction is carried on.

If at any time before final acceptance of the entire work, the Town Engineer, or his representative, considers necessary or advisable an examination of any portion of the work already completed, by removing the same, the contractor shall upon request, furnish promptly all necessary facilities, labor and materials for such examination. If such work is found to be defective in any material respect, due to the fault of the contractor or any subcontractor, contractor shall be liable for the expense for such examination and of satisfactory reconstruction.

If, however, such approval and consent shall have been given and such work is found to meet the requirements of this contract, the contractor shall be recompensed for the expense of such examination and reconstruction in the manner herein provided for the payment of cost of extra work.

The selection of laboratories and/or agencies for the inspection and tests of supplies, materials or equipment shall be subject to the approval of or designated by the Town. Satisfactory documentary evidence that the material has passed the required inspection and tests must be furnished to the Town Engineer prior to the incorporation of the material in the work.

Any rejected work will be removed from the site of the project completely at the expense of the contractor.

19. PLANS AND SPECIFICATIONS: INTERPRETATIONS

The contractor shall keep at the site of the work one copy of the plans and specifications. Bidding of this contract shall be based on the information and data contained herein. Materials of construction and component installation shall conform to the general requirements of the specifications and details contained at the end of the specifications. The Town Engineer will provide plans and directions for specific drainage projects as projects arise. System configurations, arrangements, elevations, materials and methods are to be as directed by the Town Engineer on a specific project basis.

20. SUPERINTENDENCY BY CONTRACTOR

At the site of the work, the contractor shall give his constant, personal attention to the work or employee a construction superintendent or foreman who shall have full authority to act for the contractor. It is understood that such representative shall be acceptable to the town Engineer, or his representative, and shall be one who can be contained in that capacity for the particular job involved unless he ceases to be on the contractor's payroll. The contractor's superintendent and foreman must be able to read and speak the English language.

21. CONTRACTOR'S TITLE TO MATERIALS

No materials or supplies for the work shall be purchased by the contractor or any subcontractor subject to a chattel mortgage or under a conditional sale or other agreement by which an interest is retained by the seller. The contractor warrants that he has good title to all materials and supplies used by him in the work.

22. PROTECTION OF WORK, PERSONS AND PROPERTY

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Precaution shall be exercised at all times for the proper protection of all persons, property and work the contractor shall give notice to the owners of utilities which may serve the area and request their assistance in predetermining the location and depth of various pipes, conduits, manholes, and other underground facilities. The safety provisions of applicable laws and building and construction codes shall be observed. Machinery, equipment and all hazards shall be guarded or eliminated in accordance with the safety provisions of the manual of Accident Prevention in Construction published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable law. The contractor shall furnish entirely at his own expense any and all additional safety measures deemed necessary by the Town to adequately safeguard the traveling public.

23. REPRESENTATIONS OF CONTRACTOR

The contractor represents and warrants:

- (A) That he is financially solvent and that he is experienced in, and competent to, perform the type of work involved under this contract and able to furnish the plant, materials, supplies and/or equipment to be furnished for the work; and
- (B) That he is familiar with all federal, state and municipal law, ordinances and regulations which may in any way affect the work of those employed thereunder, including but not limited to any special acts relating to the work; and
- (C) That such work required by these contract documents as is to be done by him can be satisfactorily constructed and used for the purpose for which is intended and that such construction will not injure any person or damage any property; and
- (D) That he has carefully examined the specifications and project site and that from his own investigations he has satisfied himself as to the nature of the work, the character of equipment and other facilities needed for the performance of the work, and the general local conditions which may in any way affect the work or its performance.

24. AUTHORITY OF THE ENGINEER

In the performance of the work, the contractor shall abide by all orders and directions and requirements of the Town Engineer, or his representative, and shall perform work to the satisfaction of the Town Engineer, or his representative, at such time and places, by such methods, and in such manner and sequence as he may require. The Town Engineer, or his representative, shall determine the amount, quality, acceptability, and fitness of all parts of the work, shall interpret the plans, specifications, contract documents and any extra work orders and shall decide all other questions in connection with the work. Upon request, the Town Engineer, or his representative, shall confirm in writing any oral orders, directions, requirements or determinations. The enumeration herein or elsewhere in the contract documents of particular instance in which the opinion, judgment, discretion or determination of the Town Engineer, or his representative, shall control or in which work shall be performed to his satisfaction or subject to his approval or inspection, shall not imply that only matters similar to those enumerated shall be so governed and performed, but without exception all the work shall be governed and so performed.

25. CHANGES AND ALTERATIONS

The Town Engineer reserves the right to make alterations in locations, line, grade, plan, form or dimensions of the work, or any part thereof, either before or after the commencement of construction. If such alteration diminishes the amount of work to be done, no claim for damages or anticipated profits will be warranted on the work which may be dispensed with. If such alterations increase the amount of work,

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such increases shall be paid for according to the quantity of work actually done and at the prices for such work as contained in the schedule of prices.

26. CORRECTION OF WORK

All work and all materials whether incorporated into the work or not, all processes of manufacture and all methods of construction shall be at all times and places subject to the inspection of the Town Engineer, or his representative, who shall be the final judge of quality, materials, processes of manufacture and methods of construction suitable for the purpose for which they are used. Should they fail to meet his approval, they shall be forthwith reconstructed, made good and replaced and/or corrected as the case may be, by the contractor, at his own expense.

If, in the opinion of the Town Engineer, or his representative, it is not desirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the contract documents, the compensation to be paid to the contractor thereunder shall be reduced by such amount as in the judgment of the Town Engineer, or his representative, shall be equitable. The contractor expressly warrants that his work shall be free from any defects in materials or workmanship and agrees to correct any defects which may appear within one year following the final completion of the work. Neither the acceptance of the completed work nor payment therefor shall operate to release the contractor or his sureties from any obligations under or upon this contract or the performance bond.

27. WEATHER CONDITIONS

In the event of temporary suspension of work or during inclement weather or whenever the Town Engineer, or his representative, shall direct, the contractor will, and will cause his subcontractor to sufficiently protect his and their work and materials against damage or injury from the weather. If, in the opinion of the Town Engineer, or his representative, any work or material shall have been damaged or injured by reason of failure on the part of the contractor or any of his subcontractors to protect his or their work, such work and materials shall be removed and replaced at the expense of the contractor.

28. THE TOWN'S RIGHT TO WITHHOLD PAYMENTS

The Town may withhold from the contractor so much of any approved payments due him as may, in the judgment of the Town be necessary:

- (A) To assure the payment of just claims then due and unpaid of any persons supplying labor or materials for the work;
- (B) To protect the Town from loss due to defective work not remedied; or
- (C) To protect the Town from loss due to injury to persons or damage to the work or property of other contractors or subcontractors or others, caused by the act or neglect of the contractor or any of his subcontractors. The Town shall have the right, as agent for the contractor, to apply such amounts so withheld in such manner as the town may deem proper to satisfy such claims or to secure such protection. Such applications of such money shall be deemed payments for the account of the contractor.

29. THE TOWN'S RIGHT TO TERMINATE CONTRACT

The Town of Riverhead may terminate this contract if:

- (A) the contractor shall be adjudged bankrupt or make an assignment for the benefit of creditors; or

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- (B) a receiver or liquidator shall be appointed for the contractor for any of his property and shall not be dismissed within 20 days after such appointment, or the proceedings in connection therewith shall not be stayed on appeal within the said 20 days; or
- (C) the contractor shall refuse or fail, after notice or warning from the Town Engineer, or his representative, to supply enough properly skilled workmen or proper materials to the job; or
- (D) the contractor shall refuse or fail to prosecute the work or any part thereof with such diligence as will insure its completion within the period herein specified (or any duly authorized extension thereof) or shall fail to complete the work within said period; or
- (E) the contractor shall fail to make prompt payments to persons supplying labor or materials for the work; or
- (F) the contractor shall fail or refuse to regard laws, ordinances or the instruction of the Town Engineer, or his representative or otherwise be guilty of a substantial violation of any provisions of this contract.

Upon the determination by the Town of Riverhead to terminate this contract, and in any such event, the Town, without prejudice to any other rights or remedy it may have, may give seven (7) days notice to the contractor, terminate the employment of the contractor and his rights to proceed with as to the entire work or (or at the option of the Town) as to any portion thereof as to which delay shall have occurred, and may take possession of the work and complete the work by contract, secondary contractor or otherwise, as the Town may deem appropriate. In such case, the contractor will not be entitled to receive any further payment until the work is finished. If the unpaid balance of the compensation to be paid to the contractor thereunder shall exceed the expense of so completing the work (including compensation for additional managerial, administrative and inspection services and any damages for delay), such excess shall be paid to the contractor. If such expense shall exceed such unpaid balance, the contractor and his sureties shall be liable to the Town for such excess. If the right of the contractor to proceed with the work is so terminated, the Town may take possession of and utilize in completing the work, such materials, appliances, supplies, plant and equipment as may be on the site of the work and necessary thereof.

30. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT

If the work shall be stopped by order of the court or other public authority for a period of three (3) months without act or fault of the contractor or any of his agents, servants, employees or subcontractors, the contractor may, upon ten (10) days notice to the town, discontinue his performance of the work and/or terminate the contract; in which event, the liability of the Town immediately preceding (Paragraph 31), the contractor shall not be obligated to pay to the Town any excess of the expense of completing the work over the unpaid balance of the compensation to be paid to the contractor thereunder.

31. RESPONSIBILITY FOR WORK

The contractor agrees to be responsible for the entire work embraced in this contract until its completion and final acceptance by the Town of Riverhead. The contractor further agrees that any imperfect and/or damaged work that may be discovered at any time before the completion and acceptance of work shall be removed and/or replaced in conformity with the requirements of this contract without charge to the Town. Such removal and replacement will be performed as soon as practicable following receipt of written notice from the Town Engineer that the work is imperfect and/or damaged. The contractor further agrees that the inspection of the work by the Town Engineer or his or her designee shall not relieve him of any obligation to do sound and reliable work. Furthermore, such inspection and/or partial payment for

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work shall not preclude the Town Engineer from requiring removal and/or replacement at a later time. Neither shall such inspection or partial payment be deemed to be acceptance of any work.

32. USE OF PREMISES AND REMOVAL OF DEBRIS

The contractor expressly undertakes at his own expense:

- (A) To store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any of his subcontractors;
- (B) To frequently clean up all refuse, rubbish, scrap materials and debris caused by the operations to the end that at all times, the site of the work shall present a neat, orderly and workmanlike appearance;
- (C) Before final payment hereunder to remove all surplus material, temporary structures, plants of any descriptions and debris of every nature resulting from his operations.

33. SUITS OF LAW

The contractor shall indemnify and save harmless the Town and its employees from and against all suits, claims, demands or actions for any injury sustained or alleged to be sustained by any party or parties in connection with the construction of the work or any part thereof, or any commission or omission of the contractor, his employees or agents of any subcontractor, and in case of any such action shall be brought against the Town, the contractor shall immediately take charge of and defend the same at his own cost and expense.

34. POWER OF THE CONTRACTOR TO ACT IN AN EMERGENCY

In case of an emergency which threatens loss or injury to property and/or safety of life, the contractor will be permitted to act as he sees fit without previous instructions from the Town Engineer, or his representative. He shall notify the Town Engineer, or his representative thereof immediately and any compensation claimed by the contractor due to extra work made necessary because of his acts in such emergency shall be submitted to the town Engineer, or his representative, for approval.

Where the contractor has not taken action but has notified the Town Engineer, or his representative, of an emergency indicating injury to persons or damage to adjoining property or to the work being accomplished under this contract, then upon authorization from the Town Engineer, or his representative to prevent such threatened injury or damage, he shall act as instructed by the Town Engineer, or his representative. The amount of reimbursement claimed by the contractor on account of any such action shall be determined in the manner provided herein for the payment of extra work.

35. PROVISION REQUIRED BY LAW DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall read and be enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall be forthwith physically amended to make such insertion.

36. SUBLETTING – SUCCESSOR AND ASSIGNS

The contractor shall not sublet any part of the work under this contract nor assign any money due him hereunder without first obtaining the written consent of the town. This contract shall insure the benefit of

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and shall be binding upon the parties hereunder and upon their respective successors and assigns, but neither party shall assign or transfer his interest herein in whole or in part without consent of the other.

37. GENERAL MUNICIPAL LAW CLAUSE

Pursuant to the provisions of Section 103-a of the General Municipal Law, in the event that the bidder or any member, partner, director or officer of the bidder, should refuse, when called before a grand jury to testify concerning any transaction or contract had with the state, any political subdivision thereof, a public authority or any public department, agency or official of the state or of any political subdivision thereof or of a public authority, to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant question concerning such transaction or contract, such person, and any firm, partnership, or corporation of which he is a member, partner, director or officer shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any contracts with any municipal corporation or any public department, agency or official thereof for goods, work or services for a period of five (5) years after such refusal, and any and all contracts made with any municipal corporation or any public department, agency or official thereof on or after the first day of July, 1959, by such person, and by any firm, partnership or corporation of which he is a member, partner, director or officer may be canceled or terminated by the municipal corporation without incurring any penalty or damages on account of such corporation for goods delivered or work done prior to the cancellation or termination shall be paid.

38. CONTRACTOR'S INSURANCE

The contractor shall not commence any work until he has obtained, and had approved by the Town, all the insurance required under this contract as enumerated herein:

Workers' Compensation Insurance
Public Liability and Property Damage Insurance
Contractor's Protective Liability and Property Damage Insurance
Owner's Protective Public Liability and Property Damage Insurance
Automobile Public Liability and Property Damage Insurance

The contractor shall not permit any subcontractor to commence any operation on the site until satisfactory proof of carriage of the above-required insurance has been posted with and approved by the Town.

- (A) Workers' Compensation Insurance: The contractor shall take out and maintain, during the life of this contract, Workers' Compensation Insurance for all his employees employed at the site of the project, and in case of any of the work being sublet, the contractor shall require all subcontractors similarly to provide Workers' Compensation Insurance for all the latter's employees unless such employees are covered by the protection afforded by the contractor. Limits: statutory for Workers' Compensation, One Million Dollars (\$1,000,000) Employers Liability.
- (B) Public Liability and Property Damage Insurance: The contractor shall take out and maintain during the life of this contract such Public Liability and Property Damage Insurance as shall protect him or any subcontractor performing work covered by this contract from claims for damages for personal injury including accidental death as well as from claims for property damage which may arise from operations under this contract, whether such operations be completed by the contractor or by any subcontractor, or by anyone directly or indirectly employed by either of them, and the amounts of such insurance shall be as follows:

Public Liability Insurance in an amount not less than One Million Dollars (\$1,000,000) combined single limit for bodily injuries, including wrongful death, and property damage. The Town of Riverhead must be named as an additional insured.

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- (C) Liability and Property Damage Insurance: the above policies for Public Liability and Property Damage Insurance must be so written as to include Contractor's Protective Liability and Property Damage Insurance to protect the contractor against claims arising from the operations of any subcontractor. The Town of Riverhead shall be named as additional insured.
- (D) Owner's Protective Public Liability and Property Damage Insurance: The contractor shall furnish to the Town, with respect to the operations he or any of his subcontractors perform, a regular Protective Public Liability Insurance policy for, and in behalf of the Town, providing for a limit of not less than One Million Dollars (\$1,000,000) for all damages arising out of bodily injuries to, or death of, one person and subject to that limit for each person, a total limit of One Million Dollars (\$1,000,000) for all damages arising out of bodily injuries to, or death of, two or more persons in any one accident; and regular Protective Property Damage Insurance providing for a limit of not less than One Million Dollars (\$1,000,000) for damages arising out of injury to, or destruction of, property during the liability of the Town. The coverage provided under this policy must not be affected if the Town performs work in connection with the project either for or in cooperation with the contractor or as an aid thereto whether the same be a part of the contract or separate therefrom, by means of its own employees or agents, or if the Town directs or supervises the work to be performed by the contractor.
- (E) Automobile Public Liability and Property Damage Insurance: The contractor shall take out and maintain during the life of the contract such Automobile Public Liability and Property Damage Insurance as shall protect him and any subcontractor performing work covered by this contract from claims for damages for personal injury, including accidental death as well as from claims for property damage which may arise from operations under this contract, whether such operations be by himself or by a subcontractor or by anyone directly or indirectly employed by either of them and the amounts of such insurance shall be as follows:

Automobile Public Liability Insurance in an amount not less than One Million Dollars (\$1,000,000) combined single limit for bodily injuries, including wrongful death, and property damage. The Town of Riverhead must be named as an additional insured.

Automobile Property Damage Insurance in an amount of not less than One Million Dollars (\$1,000,000) for damages on account of any accident and in an amount of not less than One Million Dollars (\$1,000,000) for damages on account of all accidents.

38A. HOLD HARMLESS CLAUSE

To the fullest extent permitted by law, the contractor shall indemnify and hold harmless the Owner and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (i) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (ii) is caused in whole or in part by any negligent act or omission of the contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in the paragraph.

39. CLAIMS AGAINST TOWN OFFICIALS AND EMPLOYEES

The Contractor expressly agrees and represents that the contractor shall make no claim and shall bring no action pursuant to any federal or state laws, including, but not limited to 42 U.S.C. § 1983, against any Town official or employee in his/her individual or personal capacity for any act, omission, or statement

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made or done relating to, or arising out of, this contract and expressly waives its rights to bring such a claim pursuant to any federal or state laws, including, but not limited to 42 U.S.C. § 1983.

40. PROOF OF CARRIAGE OF INSURANCE

The contractor shall furnish the Town with certificates of each insurer insuring the contractor under this contract except with respect to subdivision "D". In respect to this paragraph, the contractor shall furnish the Town with the original insurance policy.

Both certificates, as furnished, and the insurance policy, as required, shall bear the policy numbers, the expiration date of the policy and the limits of liability thereunder. Both the certificates and the policy shall be endorsed to provide the Town with any notice of cancellation at least five (5) days prior to the actual date of such cancellation.

The insurance company utilized must have a minimum AM Best Rating of "A-VII".

41. TERM OF CONTRACT

The term of this contract shall be until the completion date set by the Notice to Proceed and the length of contract time (calendar days) as stipulated in the Proposal Form. The Town of Riverhead shall have the option of extending this contract in six-month intervals up to a maximum of one additional year when mutually agreed upon by the Town and the contractor.

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GENERAL CONDITIONS

1. DEFINITIONS

The "General Conditions" are hereby made part of these Specifications and are attached herein.

Where any article of the General Conditions is supplemented hereby, the provisions of such article shall remain in effect. All the supplemental provisions shall be considered as added thereto. Where any such article is amended, voided or superseded thereby, the provisions of such article not so specifically amended, voided or superseded shall remain in effect.

Work, materials, plant, labor and other requirements of the General Conditions shall be furnished by the Contractor. No direct payment will be made for these General Conditions, and payment shall be deemed to be included in the Contract price or various items of the entire Contract.

The words "or approved equal", as hereinafter used, shall refer to the use of an equal product that has received prior approval by the Consulting Engineer for the District.

1.1. DEFINITION OF TERMS

Whenever the following words and expressions are used in the Specifications, it is understood that they have the meaning defined below:

Plans: All official drawings or reproductions of drawings pertaining to the work or to any structure connected therewith.

Specifications: The body of directions, requirements, descriptions, etc. contained in this document, together with all documents of any description and agreements made (or to be made) pertaining to the methods or manner of performing the work and/or to the quantities and quality of materials to be furnished and accepted under this contract.

Town: Town Board of the Town of Riverhead.

Engineer: H2M architects + engineers, Consulting Engineer for the District.

Contract: Collectively, the contract executed by the Town and the contract, Notice to Bidders, Instruction to Bidders, Proposal Form, Form of Bond, Conditions of Contract, General Conditions, Specifications, Addenda, Performance Bonds, and all supplemental agreements made or to be made.

Inspector: An authorized representative of the Town assigned to make any and all necessary inspections of the work performed and the materials furnished by the contractor.

Materials: Any approved materials acceptable to the Town and conforming to the requirements of these specifications.

Work: All of the work proposed to be accomplished at the site of the project, and all such other work as is in any manner required to accomplish the complete project. This includes all plant, labor, materials, supplies, equipment and other facilities and acts necessary or proper or incidental to the carrying out and completion of other terms of this contract. The term "work performed" shall be construed to include the materials delivered to and suitably stored at the site of the project.

2. STANDARDS OF WORKMANSHIP

The apparent silence of the specifications as to any detail or and apparent omission from them of a detailed description concerning any work to be done and materials to be furnished shall be regarded as

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meaning that only the best general practice observed in the latest current construction work is to prevail and that only material and workmanship of first quality is to be used in this connection and all interpretations of these specifications shall be made upon this basis.

3. SAMPLES

The contractor shall furnish for approval, all samples as directed. The work shall be in accordance with approved samples. Samples shall be submitted in ample time so as to prevent delay in fabrication or ordering of materials, allowing for a reasonable time for the Town Engineer, or his representative, to consider the samples submitted, and is necessary, to permit a re-submission of samples to the Town, or its representative, until approval is given.

Work and material shall be furnished and executed in accordance with approved samples, in every aspect. Each sample shall be labeled, bearing material, name and quality, contractor's name, date and other pertinent data. Unless otherwise specified, samples shall be in duplicate and of adequate size to show quality, type, color, range and finish and texture of material. Materials shall not be ordered until approval is received in writing from the Town, or its representative.

4. MANUFACTURED MATERIALS

Where several materials are specified by name, the Town, or its representative, shall have the right, before execution of the contract, to require any and all bidders to state the materials upon which they based their bid. Where any materials are specified by name or trade name, or by catalog number of a company or companies, the contractor shall furnish the article mentioned unless approval of the Town, or its representative, is obtained in writing for a substitution. Should the contractor desire to substitute other materials for one or more specified by name, he shall apply in writing for such permission and state credit or extra involved. He shall also provide supporting data and samples for the consideration of the Town.

Unless particularly specified otherwise, all manufactured articles, materials and equipment shall be applied, assembled, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer and including the necessary preparation to properly install the work. Where reference is made to manufacturer's directions, the contractor shall submit such directions to the Town or its representative as required.

The materials used in construction shall be disposed so as not to endanger the work, and so that full access may at all times be had to partly completed work and structures and they shall be so disposed as to cause no injury to those having access to the work or any of the units.

All labor shall be performed in the best and most workmanlike manner by mechanics skilled in their respective trades. Standards of work required throughout shall be of such grades as will bring first-class results only. The type of labor employed by the contractor shall be such as will insure the uninterrupted continuity of the entire work, without conflict of any kind.

5. LABORATORY

Laboratories shall be approved by the Town, or its representative, for testing the materials to be used under the contract. Where tests are made, two certified copies showing correctly the chemical analysis and physical tests shall be furnished to the Town, or its representative.

6. SHOP DRAWINGS

The contractor shall submit to the Town Engineer, electronic submittals in accordance with Section 013300 – Submittals and two (2) hard copies of all shop drawings and schedules and no work shall be

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fabricated until his approval has been given. All shop drawings submitted to the Town Engineer must bear the contractor's stamp of approval evidencing that the drawings have been checked.

The contractor will make any corrections in the drawings required by the Town or its representative and will file with the Town or its representative an electronic and two (2) corrected hard copies. Approval by the Town Engineer of such drawings or schedules shall not relieve the contractor from responsibility for:

- (a) Errors of any sort in shop or setting drawings or schedules;
- (b) Deviations from Plans and Specifications unless the contractor, at the time of submission of said drawings and schedules, has given notice to the Town or its representative of any such deviations.

7. PERMITS

7.1 Municipal: All work in connection with the installation of pipes or other underground structures of a like nature either within or without the limits of the highway, shall follow all the provisions as contained herein together with the provisions, as they apply, of the Highway Law, Road Openings, Section 149 and Section 198 of Town law, with all subsequent changes, additions or corrections thereto.

7.2 Suffolk County: All permits required for opening country roads and making connections with county drains will be obtained by the Contractor unless otherwise stated in the Contract documents. A copy of the permit must be kept on the job site at all times. The contractor will not be permitted to open any county road or make any connection to any county drain until he has obtained required permits.

7.3 State of New York: The contractor shall obtain all necessary New York State highway permits whenever the contract requires any work to be done within or upon existing state highway right-of-ways. These permits shall be obtained from the District Office in Hauppauge prior to the performance of the work. Upon application for the permit, the contractor will be required to supply the following:

- (1) Three (3) copies of a sketch or print showing description and location of the proposed work. These prints will be supplied to the contractor by the Town or its representative.
- (2) Contingent liability insurance for the state (in addition to his own liability insurance) shall be furnished in amounts and manner as required by the State of New York. The contingent protective liability and complete operations liability insurance policy to cover:

"The people of the State of New York and/or the Highway Superintendent covering liability arising with respect to all operations through highway permits by permitted by anyone acting by, through or for the permitted, including omissions and supervisor acts of the State", in the amount of personal injury (including death) and property damage as required.

7.4 State of New York Department of Conservation: The contractor shall coordinate with the property Owner's dewatering system and operation as per the Owner's approved New York State DEC dewatering permits whenever the contract requires any work to be done requiring continuous dewatering facilities or a discharge quantity requiring said permit from the NYSDEC. These permits shall be obtained by the Property Owner from the NYSDEC Regional Office in Stony Brook prior to the performance of the work. Upon application for the permit, the Property Owner will be required to supply the following to the Town and the contractor in order to coordinate the work and schedule of this contract:

- (1) Copies of a sketch or print showing description and location of the proposed dewatering system. These prints will be supplied to the contractor and the Town and the Town's representative.

GENERAL CONDITIONS

8. CONTRACT DOCUMENTS

The Contract Documents include, but are not limited to, the General Conditions, General Specifications, Detailed Specifications, Plans, Proposal, Contract and other sections as either cited on the Index page(s) or actually included in the bound documents.

Each section of the Contract Documents is intended to be complementary to the other sections.

It is intended that they include all items of labor and materials and everything required and necessary to complete the work, even though some items of work or materials may not be particularly mentioned in every section or may have been inadvertently omitted from the Drawings or Specifications or both.

The contractor will be furnished with five (5) sets of Plans and Specifications giving all the details and dimensions necessary for carrying out the work. One copy of Plans and Specifications furnished to the contractor must be kept constantly at the site. Anything shown on the Plans and not mentioned in the Specifications or mentioned in the Specifications and not shown on the Plans and all work and materials necessary for the completion of the work according to the intent and meaning of the contract shall be furnished, performed and done as if the same were both mentioned in the Specifications and shown on the Drawings. Any conflict or inconsistency between the figures and scale of Drawings shall be submitted by the contractor to the Town Engineer, or his representative, whose decisions hereon shall be conclusive.

In the event the meaning of any portion of the Specifications or Drawings or any supplementary drawings or instructions of the Town Engineer, or his representative, is doubtful, the same shall be understood to call for the best type of construction, both as to materials and workmanship, which reasonably can be interpreted.

All materials and workmanship must be strictly in accordance with the Plans and Specifications.

Additional copies of Plans and Specifications, when requested will be furnished to the contractor at cost of reproduction.

The contractor shall furnish to each of the subcontractors and materials men such copies of the Contract Documents as may be required for their work.

9. ERRORS, OMISSIONS AND DISCREPANCIES

If any errors, omissions or discrepancies appear in the drawings, specifications or other documents, the contractor shall, within ten (10) days from receiving such drawings, specifications or documents, notify the Town, or its representative, in writing of such errors or omissions. In the event of the contractor's failing to give such notice, he will be held responsible for the results of any such errors or omissions and the cost of rectifying the same.

If, in the opinion of the contractor, any work is shown on drawings, or details, or is specified in such a manner as will make it impossible to produce a first class piece of work, or should discrepancies appear between the drawings and/or specifications, he shall refer the same to the Town, or its representative, for interpretation before proceeding with the work. If the contractor fails to make such references to the Town, or its representative, no excuse will thereafter be entertained for failure to carry out the work in a satisfactory manner as directed.

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Should a conflict occur in or between the drawings and specifications and/or existing conditions, the contractor shall be deemed to have estimated on the more expensive way of doing the work, unless he shall have asked for and obtained the decision in writing from the Town Engineer or his representative, before the submission of bids, as to which method or materials will produce the results to the best interests of the Town.

10. TEMPORARY TOILET

The contractor shall provide and maintain a sanitary temporary toilet where directed by the Town, or its representative. The temporary toilet shall be enclosed, weatherproof and kept in a sanitary condition at all times. Upon removal of the temporary outside toilet, and all evidence of the toilet shall be removed from the site.

11. CUTTING, PATCHING AND DIGGING

The contractor shall do all cutting, fitting or patching of his work that may be required to make its several parts come together properly and fit it to receive or be received by work of other contractors shown upon or reasonably implied by Drawings and Specifications for the completed structure, and he shall make good after them as the Town, or its representative may direct. Any cost caused by defective or ill-timed work shall be borne by the party responsible therefore.

The contractor shall not endanger any work by cutting, digging or otherwise, and shall not cut or alter the work of any other contractor except with the consent of the Town, or its representative.

12. PROPER METHOD OF WORK AND PROPER MATERIALS

The Town, or its representative, shall have the power in general to direct the order and sequence of the work, which shall be such as to permit the entire work under this contract to be begun and to proceed as rapidly as possible and such as to bring the several parts of the work to a successful completion at about the same time.

If at anytime before the commencement or during the progress of the work the materials and appliances used or to be used appear to the Town Engineer, or his representative, as insufficient or improper for assuring the quality of the work required, or the required rate of progress, he may order the contractor to increase their efficiency or to improve their character, and the failure of the Town, or its representative, to demand any increase of such efficiency or improvement shall not release the contractor from his obligation to secure the quality of work or the rate of progress specified.

During freezing or inclement weather, no work shall be done except such as can be done satisfactorily and in a manner to secure first class construction throughout. All work shall be done in such a manner as will properly protect and support existing permanent structures, pipe lines, etc.

13. INSPECTION

Inspectors shall be authorized to inspect all work done and materials furnished. Such inspections may extend to all parts of the work and to the preparation or manufacture of the materials to be used. In case of any dispute arising between the contractor and the inspector as to materials furnished or the manner of performing the work, the inspector shall have the authority to reject material or suspend the work until the question at issue shall be referred to and decided by the Town, or its representative. The inspector shall not be authorized to revoke, alter, enlarge, relax or release any requirements of these specifications; nor approve or accept any portion of the work; nor issue instruction contrary to the plans and specifications. The inspector shall in no case act as foreman or perform other duties for the contractor or interfere with the management of the work by the latter.

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Any advice which the inspector may give the contractor shall in no way be construed as binding the Town, or its representative, nor the Town in any way, nor releasing the contractor from the fulfillment of the terms of the contract.

The contractor shall be conclusively presumed to be acquainted with all existing conditions and to guarantee that all work and materials shall, upon final completion of the work, be turned over to the Town in a complete and perfect condition and the contractor shall be responsible for the proper care, maintenance and protection of all work and material until his entire contract is completed and all work and materials found in good condition and accepted. The contractor will be held responsible for the entire work until completed and accepted by the Town.

The contractor shall, at all times, provide the Town, and its representative, assistants and inspectors under him with necessary facilities for determining both on the job and at the places of manufacture, that all work being performed and all materials being manufactured are strictly in accordance with the contract.

Until acceptance of work by the Town, the contractor shall be responsible for all damages to the work including action of the elements or any other cause whatsoever. The contractor shall continuously and adequately protect the work against damage from any cause.

14. WAIVER

Neither the inspection by the Town, its representative or any part of their employees, nor any order, measurement or certificate by the Town, or its representative, nor any order by the Town for the payment of any money, nor any payment for or acceptance of, the whole or any part of the work by the Town, its representative, or the Town, nor any extension of time, nor any possession taken by the Town or its employees shall operate as a waiver of any provision of this contract or of any power herein reserved to the Town or any right to damages herein provided; nor shall any waiver of any breach of the contract constitute a waiver of any subsequent breach. Any remedy provided in this contract shall be construed as cumulative in addition to each and every remedy herein provided.

15. WATER AND ELECTRIC POWER

All water and electric power supply for construction purposes must be provided by the contractor. The cost shall be borne by the contractor.

16. MACHINERY AND EQUIPMENT

All machinery, equipment, trucks and vehicles used in the prosecution of the work or in connection therewith, shall at all times be in proper working condition.

The contractor shall be responsible for curtailing noise, smoke, fumes, or any other nuisance resulting from his operations. He shall, upon written notification from the Town, or its representative, make any repairs, replacements, adjustments, and additions and furnish mufflers when necessary to fulfill these requirements.

17. RIGHT TO USE WORK

The Town may enter upon and use the whole or any portion of the work, which may be in condition to use any time previous to its final acceptance by the Town. Such use shall not constitute or be evidence of acceptance by the Town of the whole or any part of the material furnished or work performed under the contract.

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18. NOTICE OF WARNING

If the contractor shall fail to make prompt payment to persons supplying labor or materials for the work, or refuse or fail to supply enough properly skilled workmen or proper materials or refuse or fail to prosecute the work or any part thereof with such diligence as will insure its completion within the period herein specified (or any duly authorized extension thereof) or fail to complete the work within said period or refuse or fail to regard laws, ordinances, codes, instruction of the Town, or its representative, then the Town shall forward by registered mail to the contractor, at the address given in the contract, a Notice of Warning, and in the event the contractor fails to comply with said Notice of Warning within five (5) days from receipt thereof, the Town shall have the right to terminate the contract.

19. WARNING SIGNS

Contractor shall provide and maintain proper luminous warning and detour signs where directed by the Town, or its representative.

Obstruction, such as stored materials, equipment and excavations shall be marked with no less than two (2) lights which shall be no more than four (4) feet apart.

All lights shall be kept burning from one-half hour before sunset until one-half hour after sunrise.

20. ACCIDENT PREVENTION

During the performance of the work, the contractor shall exercise all reasonable precautions for the protection of persons and property. The safety provisions of applicable laws, building and construction codes shall be observed. Machinery, equipment and all other physical hazards shall be guarded in accordance with the safety provisions of the Manual of Accident Prevention in Construction published by the Associated General Contractors of America to the extent that such provisions are not inconsistent with federal, state or municipal laws or regulations.

If any operation, practice or condition is deemed by the Town, or its representative, to be unsafe, he shall notify the contractor in writing to take corrective action. Where in the opinion of the Town, or its representative, any operation, practice or condition shall be promptly discontinued and before the affected part of the work is resumed, remedial action taken.

The Town reserves the right to remedy any neglect on the part of the contractor as regards the protection of the work which may come to its attention, after twenty-four (24) hours notice in writing; except that in cases of emergency, it shall have the right to remedy any neglect without notice, and in either case to deduct the cost of such remedy from money due the contractor.

Nothing in the foregoing paragraphs shall be construed as relieving the contractor from full responsibility at all times for safe prosecution of the work.

21. DAMAGES

The contractor shall pay and make good all losses or damages arising out of any cause connected with the contract and shall indemnify and save harmless the Town, and its representatives, from any and all claims and any and all liability or responsibility of every nature against the Town or any of its officers or agents, by reason of, or connected with the work or materials furnished under the contract and shall pay all costs and expenses of every kind, character, and nature whatsoever, occurring upon or arising out of the contract.

GENERAL CONDITIONS

All damages, direct or indirect, of whatever nature either resulting from the performance of or resulting to the work under this Contract during its progress from whatever cause shall be borne and sustained by the Contractor, and all work shall be solely at its risk until the date of the final payment request, as prepared by the Engineer.

22. MAINTENANCE OF TRAFFIC

All work under this contract is to be completed within the time indicated in the Contract Agreement or as extended by the Town. If in the meantime it should become necessary, because of the lateness of the season, or any other reason to stop work, the contractor shall at his own expense, open proper drainage ditches, erect temporary structures where necessary, prepare the roads so there will be minimum interference with traffic, set up and maintain a competent organization as directed by the Town, or its representative, to keep the highways in first class condition for traffic, and take every precaution to prevent any damage or unreasonable deterioration of the work during the time it is closed.

23. PROTECTION OF LAND MARKERS, TREES, SHRUBS, AND PROPERTY:

Wherever in the conduct of the work, a monument making a point of public or private survey is encountered or brought to view by excavation, the fact shall at once be communicated to the Town, or its representative. In no case shall the contractor remove the same until the location for resetting shall have been made by the Town, or its representative. All monuments or land markings exposed to view when the work is first undertaken shall be carefully preserved and the greatest care exercised to prevent injury to or disturbance of position of the monument.

The unit price of all items shall include the cost of restoring to its former condition any sidewalks or curbs, as well as restoring any trees, shrubs or lawns that may be damaged during this construction. No additional payment will be made.

The contractor is required at his own expense to obtain any and all permits for use of private property if he uses such property for storage, transportation or accomplishment of the work under the contract. Private property shall be cleaned up neatly, any damage repaired and premises restored to their original condition.

24. PROTECTION OF UTILITIES

The contractor shall familiarize himself with the existence of structures of municipal and other public service corporations on or adjoining the site of the work, for the area within the scope of the contractors work. The contractor shall be responsible for calling for a mark out given reasonable opportunity to work in cooperation with the owners of these utilities in the work, reconstruction or alteration of these structures. Such reconstruction and alteration shall be so conducted as to delay or interfere as little as practicable with the work of the contractor. Any additional cost of various items or work because of these utilities shall be included in the price bid for these items.

The Town, or its representative, shall direct the public utility corporations to shift or remove those utility structures that may be necessary to permit the contractor to carry out the work in accordance with the plans. The contractor shall not remove or cause to be removed, any structure or part of a structure owned by a public utility corporation without the approval of the Town, or its representative.

The contractor shall cooperate with the public utility corporation whose structures (aerial, surface or subsurface) are within the limits of or along the outside of the right-of-way, to make it possible for them to maintain uninterrupted service. The contractor shall conduct his operations in such a way as not to delay or interfere as little as practicable with the work of the utility corporation.

GENERAL CONDITIONS

25. APPROVAL OF SUBCONTRACTORS AND MATERIALS

Prior to commencing any work under this Contract, the Contractor shall submit to the Engineer for approval a list of all the subcontractors and material suppliers it proposes to use for this Contract.

No subcontractor or material supplier will be permitted to deliver materials or perform any work on this Contract until it has been approved by the Engineer.

26. INTERPRETATION OF DRAWINGS, ETC.

In the event of discrepancies between the Drawings and the Specifications, the following order shall be given preference when making interpretations:

- a. Addenda (later dates to take precedence over earlier dates).
- b. Drawings (schedules or notes to take precedence over other data shown on Drawings).
- c. Detailed Specifications
- d. General Specifications

On all Plans, Drawings, etc., the figure dimensions shall govern in the case of discrepancy between the scales and figures.

The Contractor shall take no advantage of any error or omission in the Plans, or of any discrepancy between the Plans and Specifications, and the Engineer shall make such corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the Specifications and of the Plans as construed by him, and his decision shall be final.

All work that may be called for in the Specifications and not shown on the Plans, or work shown on the Plans and not called for in the Specifications, shall be furnished and executed by the Contractor as if designated in both. Should any work or material be required which is not denoted in the Plans and Specifications, either directly or indirectly, but which is necessary for the proper carrying out of the intent thereof, it is understood and agreed that the same is implied and required, and that the Contractor shall perform such work and furnish such materials as if they were completely delineated and described.

27. ADDITIONAL WORK

Additional work, if required to be performed under this Contract, shall be in accordance with the applicable paragraphs of the Contract. The Town will be the sole judge as to whether such work was intended as part of the Contract or is in addition thereto.

28. OCCUPATIONAL SAFETY AND HEALTH ACT

The Contractor shall meet all standards of the Occupational Safety and Health Act of 1970 and subsequent revisions. This shall include, but not be limited to, the following areas:

Sanitation, noise, radiation, gases, vapors, fumes, mists, dust, illumination, ventilation, protective equipment, fire protection, waste disposal, electrical hazards, scaffolds and ladders, floor holes and wall openings, heavy equipment and permit-required confined spaces.

All specific requirements of the Act shall be adhered to.

GENERAL CONDITIONS

29. SAFETY PROVISIONS

The Contractor shall take every precaution and shall provide such equipment and facilities as are necessary or required for the safety of its employees. In case of an accident, first aid shall be administered to any who may be injured in the progress of the work. In addition, the Contractor shall also be prepared for the removal to the hospital for treatment of any employee either seriously injured or ill.

30. SANITARY REGULATIONS

In addition to compliance with the Occupational Safety and Health Act, the Contractor shall erect and maintain necessary sanitary conveniences for the use of employees on the work. Such conveniences shall be properly secluded from observation, and their use shall be strictly enforced. Such sanitary conveniences shall be constructed in compliance with all laws, ordinances or regulations governing these facilities. The contents of same shall be removed with sufficient frequency to prevent nuisance, and disposed of to the satisfaction of the Town, or its representative.

The Contractor shall obey and enforce such other sanitary regulations and orders and shall take such precautions against infectious diseases as may be deemed necessary. In case any infectious diseases occur among its employees, it shall arrange for the immediate removal of the patient from the work and his isolation from all persons connected with the work.

The building of shanties or other structures for housing the workers, tools, machinery or supplies will be permitted only at approved places, and the sanitary condition of the grounds in and at such shanties or other structures must, at all times, be maintained in a satisfactory manner.

31. RESPONSIBILITY OF ENGINEER AND CONTRACTOR DURING CONSTRUCTION

The Engineer is responsible solely for the general and/or detailed inspection of the work being performed. Such inspection will be periodic and strictly to assure conformance of the Contractor with the Plans and Specifications, such that the end product will conform to the Plans and Specifications.

The Contractor is responsible for complete conformance to the Plans and Specifications, proper construction procedures, coordination with subcontractors, other contractors and utilities, and safe working conditions for its employees.

32. LABOR

All contractors and subcontractors employed upon the work shall and will be required to conform to the Labor Laws of the State of New York and the various acts amendatory and supplementary thereto; and to all other laws, ordinances and legal requirements applicable thereto.

All labor shall be performed in the best and most workmanlike manner by mechanics skilled in their respective trades. The standards of the work required throughout shall be of such grade as will bring results of the first class only.

33. CONTRACTOR'S REPRESENTATIVE

The Contractor, in case of his absence from the work, shall have a competent representative or foreman present, who shall follow without delay all instructions of the Engineer or his assistants in the prosecution and completion of the work, in conformity with this Contract, and shall have full authority to supply labor and material immediately. The Contractor shall also have a competent representative available to receive telephone messages and provide a reasonable reply as soon as possible, but not later than 24 hours.

34. SCHEDULE OF VALUES (LUMP SUM CONTRACTS)

Before the first partial payment under this Contract becomes due, the Contractor shall prepare a Schedule of Values which totals the amount of the Contract and submit it to the Engineer for approval. The Contractor shall make such revisions as may be required to make this Schedule conform to the true value of work as jointly agreed upon by the Engineer and the Contractor. The Contractor shall submit the Schedule of Values in accordance with the requirements contained in Section 012973.

35. INCOMPETENT EMPLOYEES

The Contractor shall employ only competent, skilled and faithful workers to do the work. Upon request of the Engineer in writing, the Contractor shall suspend or discharge from the work any disobedient, disorderly or incompetent person or persons employed thereon, and will not again employ any person so suspended or discharged without the consent of the Engineer.

This requirement shall not be made on the basis of any claim for compensation or damages against the District or any of its officers or agents.

36. CLAIMS OR PROTESTS

If the Contractor considers any work required of it to be outside the requirements of the Contract or considers any record or ruling of the Engineers or Inspectors as unfair, it shall ask for written instructions or decisions immediately, and then file a written protest with the District against the same within five (5) days thereafter, or be considered as having accepted the record or ruling.

37. NOTIFICATION, INTERFERENCE AND INJURY TO UTILITIES

The Contractor shall cooperate in every way with the utility companies.

All excavation shall be done in compliance with Article 36 of the General Business Law and notices given as provided by CLS General Business Law, Part 761.

All conduits, water mains and gas mains encountered in the construction shall be properly and safely taken care of by the Contractor, who shall, upon encountering same, notify the public corporation to whom they belong in order that they may be changed in such a manner as not to interfere with the final construction.

In case any damage shall result to any service pipe for water or gas, or any private or public sewer or conduit, by reason of negligence on the part of the Contractor, the Contractor shall, without delay and at its own expense, repair the same to the satisfaction of the Engineer. If such repairs are not made promptly or satisfactorily, the District may have the repairs made by another Contractor or otherwise, and deduct the cost of same from any monies due or to become due the Contractor.

38. INFRINGEMENT OF PATENTS

The Contractor further agrees to hold itself responsible for any claims made against the District for any infringement of patents by the use of patented articles in any one phase of construction of the work and the completion of same, or any process connected with the work agreed to be performed under this Contract or of any materials used upon said work, and to save harmless and indemnify the District from all costs, expenses and damages which the District shall be obliged to pay by reason of any infringement of patents used in the construction and completion of the work.

GENERAL CONDITIONS

39. GUARANTEE/WARRANTY

The Contractor shall guarantee and warrant its work and that of its subcontractors against defects in workmanship and/or materials for a period of one (1) year from the date of the final payment request, as prepared by the Engineer, except as otherwise specified. Upon written notification from the Engineer, the Contractor shall repair, replace or reconstruct such defects to the satisfaction of the Engineer, at no cost to the District.

40. STANDARDIZATION

The Detailed and General Specifications indicate specific manufacturers and/or catalog numbers, etc., for the purpose of standardization within the District in order to minimize stockpiling of replacement parts.

FORM OF CONTRACT

TOWN OF RIVERHEAD SEWER DISTRICT
BID FOR 203 213 EAST MAIN STREET SEWER IMPROVEMENTS
CONTRACT No. RDSD 2403
CONTRACT S: SEWERS

CONTRACT DATED _____, 2025 BY AND BETWEEN THE TOWN OF RIVERHEAD (HEREIN
CALLED THE "OWNER") AND _____
(HEREIN CALLED THE "CONTRACTOR")

WITNESSETH, the Town and the Contractor, in consideration of the premises and of the mutual covenants,
considerations and agreements contained, agree as follows:

The Notice to Bidders, Instruction to Bidders, Proposal Form, Form of Bond, Conditions of Contract, General
Conditions, Specifications, Form of Contract, Construction Drawings, and Plans, together with any Addenda, shall
form part of this contract, and the provisions thereof shall be as binding upon the parties hereto as if they were
herein fully set forth. The Table of Contents, title, heading, headlines and marginal notes contained herein are
solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or case
light upon the interpretation of the provisions to which they refer. Whenever the term "Contract Documents" is
used, it shall mean and include the Notice to Bidders, Instruction to Bidders, Proposal Form, Form of Bond,
Conditions of Contract, General Conditions, Specifications, Form of Contract, Construction Drawings, and any
Addenda. In case of any conflict or inconsistency between the provisions of the conditions of this contract shall
govern.

IN WITNESS THEROF, the parties hereunto set their hands and seals, and such of them as are corporations
have caused these presents to be signed by their duly authorized officers.

NOTE: Quantities of any or all items may be increased, decreased or eliminated in their entirety at the option of
the Town prior to or after award of the contract.

Total Bid

_____ Dollars _____

(written in words)

(figures)

ATTEST:

TOWN OF RIVERHEAD

SUPERVISOR

CONTRACTOR

TITLE

FORM OF CONTRACT

STATE OF NEW YORK

)

)ss:

COUNTY OF Suffolk)

On this _____ day of _____, 202____ before me personally appeared

_____.

(Town Supervisor)

The duly elected and qualified Supervisor of the Town of Riverhead, the corporation described in and which executed the foregoing instrument, to me known and known to me to be such Supervisor of the Town of Riverhead; and he being by me duly sworn did depose and say; that he is the Supervisor of the Town of Riverhead; that he resided at

_____, Suffolk County, New York; that he knows the corporation seal of said Town of Riverhead; that the seal affixed to said instrument is such corporate seal; and that he executed the same as such Supervisor for the purpose herein mentioned.

Notary Public

FORM OF CONTRACT

Acknowledgement by Contractor if a PARTNERSHIP

STATE OF NEW YORK)

)ss:

COUNTY OF _____)

On this _____ day of _____, 202 ____, before me personally appeared _____ to me known to by the person described in and who executed the foregoing instrument and who acknowledged to me that he executed the same.

Notary Public

Acknowledgement by Contractor if a PARTNERSHIP

STATE OF NEW YORK)

)ss:

COUNTY OF _____)

On this _____ day of _____, 202 ____, before me personally came _____ to be known and known to be to a member of _____ the firm described in and which executed the foregoing instrument and he acknowledged to me that he subscribed the name of said firm thereto on behalf of said firm for the purpose therein mentioned.

Notary Public

FORM OF CONTRACT

Acknowledgement by Contractor if a CORPORATION

STATE OF NEW YORK)

)ss:

COUNTY OF _____)

On this _____ day of _____, 202 ____, before me personally came
_____ to me known, who being by me duly sworn, did depose and say that he resides
at _____ of
_____ in the state of _____ that he is the
_____ of the _____ the corporation described in and which
executed the foregoing instrument; that he knows the seal of said corporation; that the seal affixed to said
instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Corporation; and
that he signed his name thereto by like order.

Notary Public

INDEMNITY, LIMITATION OF LIABILITY

1.0 - INDEMNITY

The Contractor and all subcontractors performing work in connection with this Contract shall HOLD HARMLESS, INDEMNIFY and DEFEND the Owner and Engineer, their consultants and each of their officers, agents and employees from any liability, claims, losses or damage including reasonable costs of defense arising out of or alleged to arise from the Contractor's or subcontractor's negligence in the performance of the work described in the Contract Documents, but not including liability that may be due to the sole negligence of the Owner, the Engineer or their officers, agents and employees.

2.0 - LIMITATION OF LIABILITY

The Contractor and all subcontractors agree to limit the liability of the Owner and the Engineer due to the Engineer's professional negligent errors or omissions such that the total aggregate liability of the Engineer to those named shall not exceed Fifty Thousand Dollars (\$50,000) or five percent (5%) of the Contract award amount, whichever is greater.

3.0 - NO CLAIM FOR DELAY

The Contractor and all subcontractors agree to HOLD HARMLESS from any and all claims for loss or damages of any nature against the Owner or Engineer for delays in commencement, performance or completion of the Contract, regardless of whether said delays are, or may be, caused by the Owner, Engineer or any governmental agency.

The above is not intended to include delays specified and outlined herein.

CONTRACTOR'S RESPONSIBILITY

It is the Contractor's responsibility to inform the Engineer in advance when a situation arises that forces the Contractor to cancel work for a given day. For example, if the Contractor informs the Engineer that he will be on the job on a certain day and then has to cancel the appointment because he cannot obtain certain labor, materials or equipment, it is the Contractor's responsibility to inform the Engineer of these latest developments and to let him know that construction observation services will not be needed for that day.

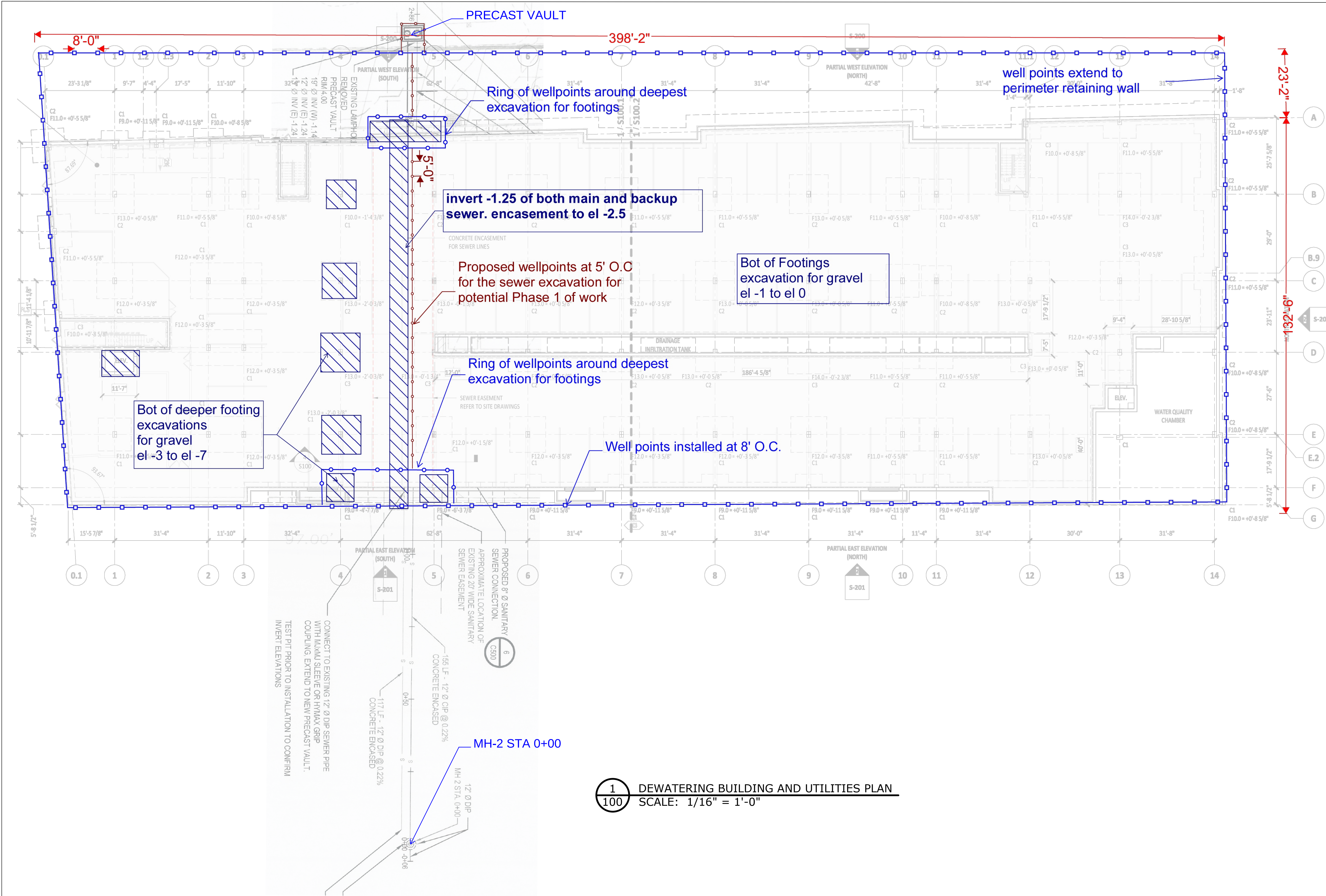
In the event that the Engineer is not given ample warning of such a cancellation and, as a result, unnecessary time is spent sending field personnel out to the project site to observe the previously scheduled construction, sufficient funds will be deducted from monies due the Contractor to reimburse the Engineer for this wasted time.

Similarly, sufficient funds will be deducted from monies due the Contractor to reimburse the Engineer for any services rendered in the field or in the office regarding work that had to be performed a second time due to substandard work on the part of the Contractor on the original work.

APPENDIX #1

PROPERTY OWNER'S PROPOSED DEWATERING PLANS AND INFORMATION

(FOR INFORMATION ONLY)



CICHETTI
ENGINEERING
PLLC

PO BOX 195
GERMANTOWN, NY 12526
PHONE: (845)598-5018

203-213 EAST MAIN STREET
RIVERHEAD, NY

USACE CONTRACT W912DS22C11013
INITIAL DEWATERING CONCEPT

No: Revision: Date:
SCALE: AS NOTED

LIST OF DRAWINGS	
DWG.#	DWG. TITLE
DEW 100.00	DEWATERING BUILDING AND UTILITIES PLAN
DEW 101.00	DEWATERING SITE PLAN
DEW 200.00	DEWATERING DETAILS

DRAWING TITLE:
DEWATERING BUILDING
AND UTILITIES PLAN

SEAL	Date
	3/21/2025
	Drawn By:
	RLY
DWG. No:	
DEW - 100.00	
SHEET No: 1-OF-3	

1 DEWATERING BUILDING AND UTILITIES PLAN
100 SCALE: 1/16" = 1'-0"

CICHETTI
ENGINEERING
PLLC

PO BOX 195
GERMANTOWN, NY 12526
PHONE: (845)598-5018

203-213 EAST MAIN STREET
RIVERHEAD, NY

No: Revision: Date:
SCALE: AS NOTED

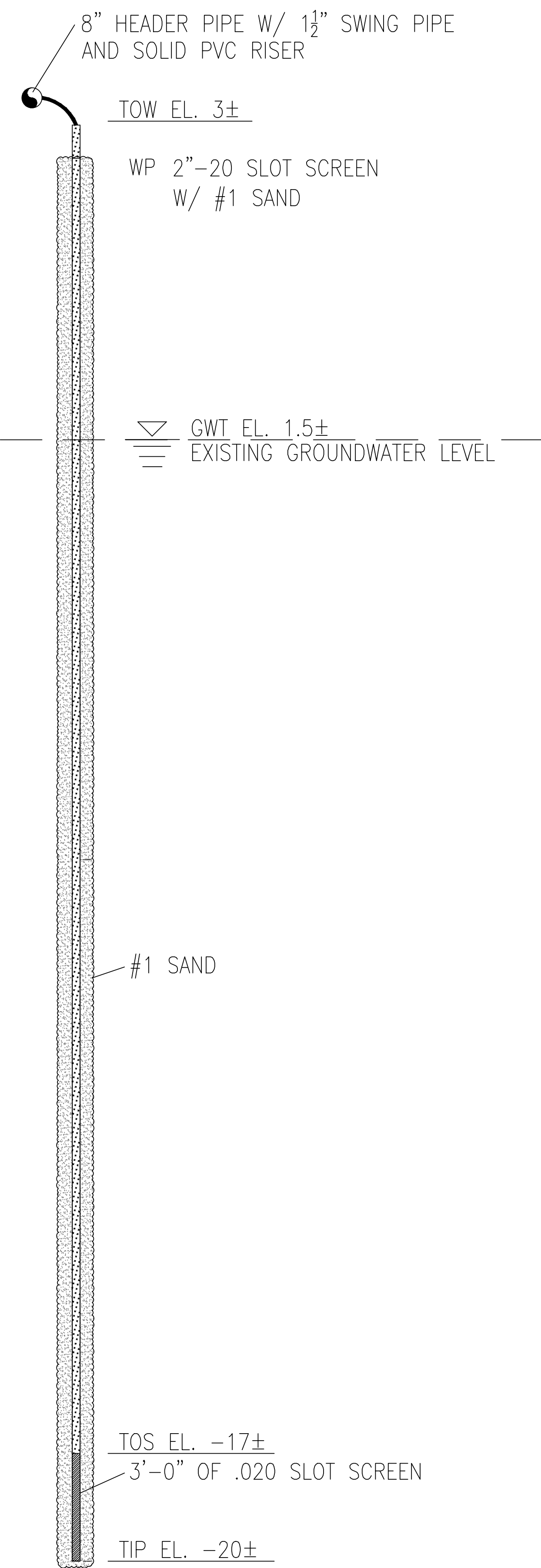
LIST OF DRAWINGS	
DWG. #	DWG. TITLE
DEW 100.00	DEWATERING BUILDING AND UTILITIES PLAN
DEW 101.00	DEWATERING SITE PLAN
DEW 200.00	DEWATERING DETAILS

DRAWING TITLE:
DEWATERING SITE PLAN

SEAL	Date
	03/21/2025
	Drawn By:
	RLY
DWG. No:	
DEW - 101.00	
SHEET No: 2 - OF - 3	



WELLPOINTS----- 161 TOTAL
SETTLING TANK- 18,000 GALLON



1 WELLPOINT SECTION
SCALE: NTS

WELLPOINT SYSTEMS AND ACCESSORIES



In the interest of product improvement, we reserve the right to change specifications without incurring any obligation for equipment previously or subsequently sold. Capacity and Head are shown for comparative purposes. Consult engineering data for exact capabilities.

Thompson Pump & Manufacturing Co., Inc. 4620 City Center Drive, Port Orange, Florida, USA 32119
Phone (800) 767-7310 • Fax (386) 761-0362 • www.thompsonpump.com

LS-903 Page 2 of 2 Rev 1.01



18,000 Gallon Open-Top Tank
(Available in California)

At Adler Tank Rentals, we are committed to providing safe and reliable containment solutions for all types of applications where performance matters.

Designed to allow tank content access via an open top, the 18,000 Gallon Open Top Tank is outfitted with a complete set of safety features, including a built-in stair and walkway, safety decals and non-slip step materials on all climbable surfaces.

- Mechanical Features
- Bare steel interior
 - 3" fill line
 - Three (3) standard 22" side-hinged manways
 - Multiple valved fill/drain ports, including floor-level valves for low point drain out
 - Sloped and V bottom for quicker drain out and easier cleaning
 - Easy-to-clean design with smooth wall interior, no corrugations and no internal rods
 - Fixed rear axle for increased maneuverability
 - Nose rail cut-out for easy access when installing hose and fittings on the front/bottom of tank
 - Open top for easy access to liquids being stored, pumped or treated
 - Full-length catwalk equipped with safety rails and non-slip tread
 - Two (2) front and two (2) rear 4" valved fill/drain port

800-421-7471 www.adlertankrentals.com



Name: 12" Rotary Wellpoint Pump

Model: 12R

The Thompson Rotary Wellpoint Pump is the original rotary wellpoint pump trusted by contractors worldwide for more than 40 years. The state-of-the-art 12R is specifically designed and engineered for wellpoint and sock dewatering with high air handling, large water volume and high vacuum capability.



Photo shown may not be exact model.

Consult factory for other versions & options including site trailers, sound attenuation, etc.

Pump End Materials	
Type	Positive displacement, low-pulsation, self-priming, rotary lobe.
Rotor	Four-lobe, single piece design with carbon steel shaft and welded carbon steel fins with polyurethane coating.
Rotor Housing	Rugged, heavy-duty cast Aluminum.
Mechanical Seal	Oil lubricated with bronze rotating and steel stationary faces. Single inside mounted, non-pusher type with self-adjusting elastomeric bellows.
Suction Tank	A36 steel with permanent solids screen, 1-1/2" drain port, adjustable vacuum breaker valve and vacuum gauge for system diagnostics.
Discharge Tank	A36 steel with canvas reinforced neoprene weighted flapper style check valve; built-in reservoir with pressure relief and 1-1/2" drain port.
Wear Plate	Replaceable, 304 stainless steel.
Bearings	Heavy-duty, oil bath-pressure lubricated, cylindrical roller type.
Bearing Housing	Heavy-duty cast Aluminum.

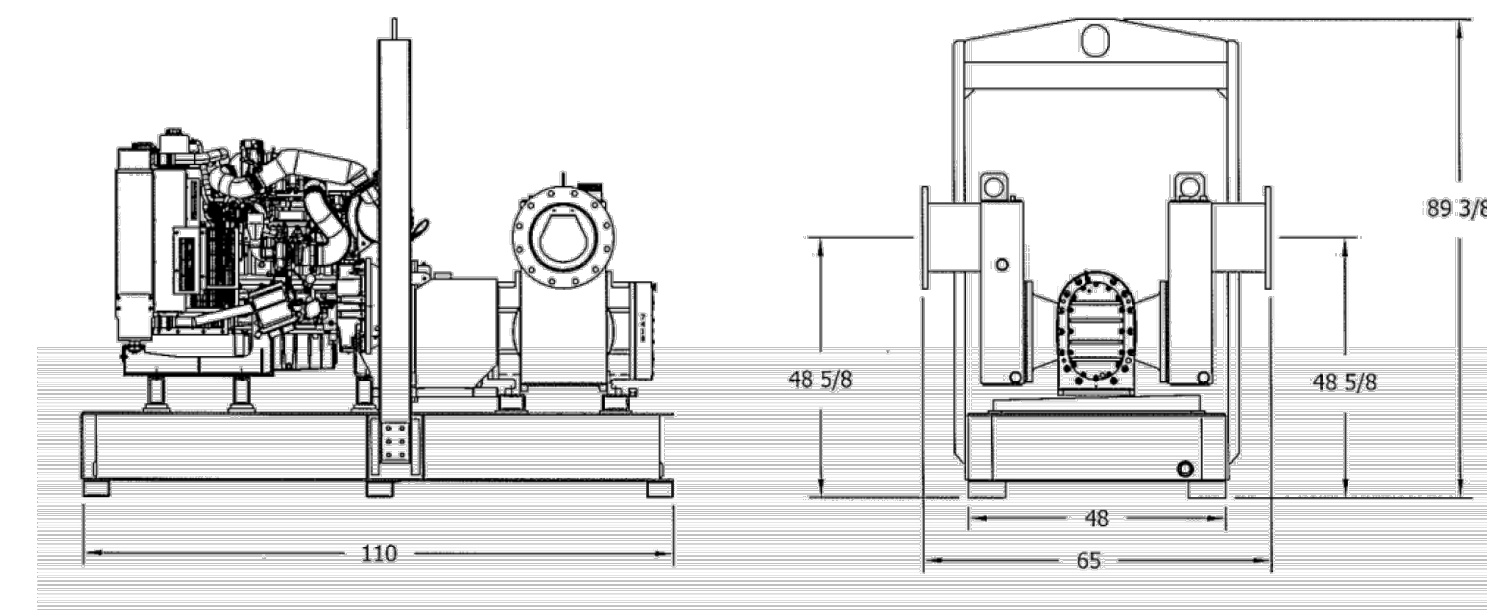
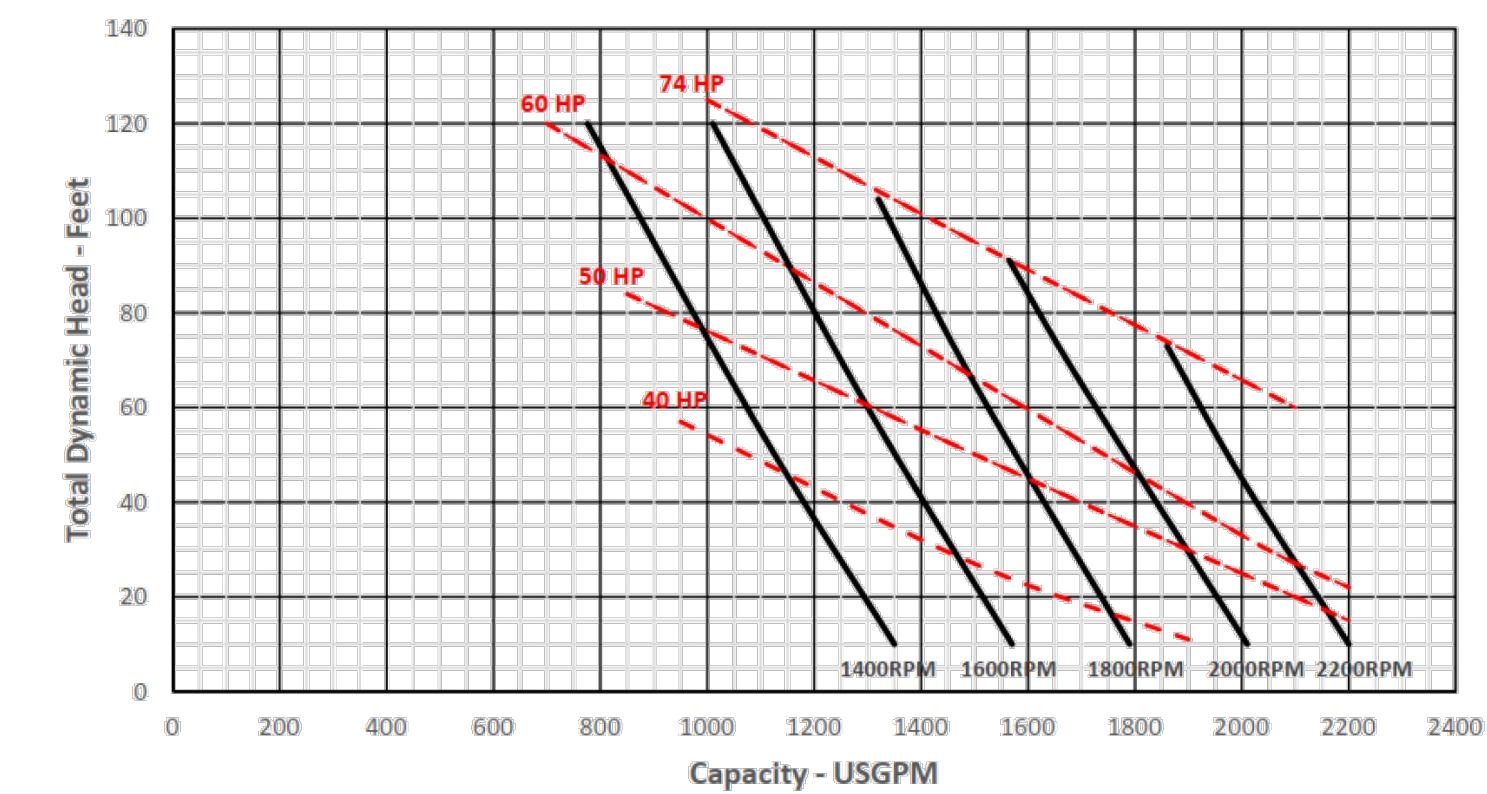
Technical Specifications			
Suction Size	12 in (30.48 cm)	Approximate Dry Weight	5,510 lbs (2,499.29 kg)
Discharge Size	12 in (30.48 cm)	Maximum Operating Speed	2,200 rpm
Maximum Solids Handling	Clear Water Only	Displacement Volume	400 cfm
Maximum Operating Temperature	200° F (93.33° C)	Maximum Operating Pressure	51.9 psi (358.17 kPa)

Fuel Tank Options*		Deutz	
Modular (M)	127 Gal	32 Hours	
Double-Wall (D)	94 Gal	24 Hours	
Modular Large Capacity (X)	200 Gal	51 Hours	
Double-Wall Large Capacity (Z)	150 Gal	38 Hours	

*Contact factory for fuel tank sizes not listed above.

Thompson Pump and Manufacturing Co., Inc. 4620 City Center Drive, Port Orange, FL 32129 USA
sales@thompsonpump.com www.thompsonpump.com

Nationwide 800-767-7310 • International +1-386-767-7310
Apr-20



Deutz TD3.6L4—74 hp @ 2,400 rpm				
Typical Operating Speed	2,200 rpm	Pump Speed	Fuel Economy	Run
Maximum Head	120 ft (36.58 m)	2,200 rpm	0.382 lb/hp-hr	31 hrs
Maximum Flow Capacity	2,200 gpm (499.4 m³/hr)	2,000 rpm	0.371 lb/hp-hr	32 hrs
Maximum Fuel Consumption	4.08 gph (15.44 L/hr)	1,800 rpm	0.364 lb-hp-hr	32 hrs

*Engine run times calculated based on a 127 gallon fuel tank.

Specifications and Illustrations are subject to revision without notice and without incurring any obligation for previous or subsequent equipment sold. Thompson Pump (ISO 9001:2015) makes no representation regarding the completeness or accuracy of this information and is not liable for any direct or indirect damages arising from or relating to this information or its use. Capacity & Head are shown for comparative purposes. Consult Thompson factory for exact capabilities.

CICHETTI ENGINEERING PLLC

PO BOX 195
GERMANTOWN, NY 12526
PHONE: (845)598-5018

203-213 EAST MAIN STREET
RIVERHEAD, NY

No: Revision: Date:
SCALE: AS NOTED

LIST OF DRAWINGS	
DWG. #	DWG. TITLE
DEW 100.00	DEWATERING BUILDING AND UTILITIES PLAN
DEW 101.00	DEWATERING SITE PLAN
DEW 200.00	DEWATERING DETAILS

DRAWING TITLE:
DEWATERING DETAILS

SEAL	Date 03/21/2025
Drawn By: RLY	
DWG. No: DEW - 200.00	
SHEET No: 3 - OF - 3	

APPENDIX #2

DEWATERING REQUIREMENTS TO BE MET BY PROPERTY OWNER'S DEWATERING
CONTRACTOR

(FOR INFORMATION ONLY)

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Work of this Section includes dewatering for structures, tanks, manholes, and all other underground pipelines and utilities.
- B. The costs associated with work of this Section shall be included in the price as bid.
- C. All costs associated with satisfying the requirements of the reviewing agency shall be solely borne by the Contractor.
- D. Dewatering Permit application must be submitted within 15 days of Notice to Proceed date.
- E. No time extensions will be granted for the Contractor's failure to obtain permits in accordance with the Contractor's own schedule and sequence of construction as may have been anticipated prior to the submission of the bid.

1.02 RELATED SECTIONS

- A. Section 315000 - Excavation Support and Protection
- B. Section 312316 - Excavation
- C. Section 312316.13 - Trenching
- D. Section 312323.13 - Backfilling

1.03 PROJECT CONDITIONS

- A. Groundwater Levels: Water levels, if shown on the Plans, solely represent the levels obtained at the time and specific locations of soil borings, monitoring wells, or test holes. They are not intended to be indicative of levels to be found at locations other than that shown. Separate payments will not be made to the Bidder / Contractor for the cost of ascertaining groundwater or surface water levels and for dewatering operations.
- B. Subsoil Conditions: The Contractor shall be solely responsible to ascertain the exact nature of soils near the excavation(s), as it affects the design of the dewatering conditions. All costs for preliminary test borings, if any, shall be included in the price as-bid.
- C. Noise Control: When dewatering systems utilizing well points or central pumping systems are used, acoustically shield pumping equipment from neighboring buildings. Use sound absorbing material on the inside of the enclosure surrounding the pump. Provide an exhaust stack extension when required by the Engineer. The Engineer will not permit the use of loud pumps generating excessive emissions and/or noise. Comply with the requirements of Section 015719 - Temporary Environmental Controls.
- D. The Contractor shall supply power to all dewatering equipment by use of a suitably sized portable generator. Temporary electric shall be furnished and installed as work of this contract.
- E. Dewatering operations shall be conducted by companies regularly engaged in this type of work, are experienced, and are knowledgeable with governing health, labor, and environmental regulations associated with dewatering operations.

1.04 REGULATORY REQUIREMENTS

- A. Apply, obtain, and pay for permits required by regulatory agencies. All associated costs including reports, plans, applications, and engineering fees shall be included in the price as bid.
- B. The Contractor shall discharge water removed from trenches and excavations in compliance with the requirements of regulatory agencies and the Owner.
- C. The Owner makes no representation that water removed from excavations can be disposed of readily or without expense associated with conveyance and/or treatment prior to discharge. The Contractor, by submitting a bid, has satisfied himself/herself that disposal of water can be discharged (returned to groundwater or surface water) in accordance with all regulatory requirements.
- D. Well pointing shall be carried out by registered well drillers in accordance with Section 15-1525 of New York State Environmental Conservation Law.
- E. The type of dewatering system shall be selected by the Contractor, as necessary to install the work. The method of dewatering to be used will depend upon subsoil conditions and the depth of water encountered. The method of dewatering and treatment system, if necessary, is at the sole discretion of the Contractor.
- F. Conduct dewatering operations and groundwater recharge so as not to cause a harmful effect on adjoining wetlands and surface waters.

1.05 SUBMITTALS

- A. Prior to submitting information to the reviewing agency, the Contractor shall submit to the Engineer, for review and comment purposes only, the proposed layout of the dewatering system together with proposed sampling protocols that are to be followed by the Contractor in order to secure the required permits and approvals. The dewatering plan shall describe the method, details, installation, and operation of the proposed system. The plan shall demonstrate the control of groundwater to improve stability of the walls and bottom of the excavations. Include the following:
 - 1. A site map depicting the work areas where dewatering systems will be installed or locations where dewatering will be performed and location where produced water will be discharged.
 - 2. A schedule that sets forth anticipated dates of dewatering activities during construction.
 - 3. Description and location(s) of structures, devices, and other means and methods that will be installed or used to treat/control turbidity, suspended solids, and other pollutants (if any), prior to the discharge of produced waters.
 - 4. Submit to the Engineer, for record purposes only, the proposed layout of the dewatering system together with any subsurface explorations, sampling and testing results, or studies that may have been conducted by the Contractor in order to secure the required permits and approvals.
 - 5. The Contractor shall provide a copy of the dewatering permit as issued by the reviewing agency to the Engineer for record purposes.

PART 2 - PRODUCTS

2.01 2.01 – MATERIALS

- A. Settling/Frac Tank
 - 1. Where water is to be discharged to a surface water body a settling/frac tank or other approved means of sediment capture shall be utilized prior to point of discharge.

2. The tank shall be of the proper size to accommodate the dewatering design flow, and to support the hydrostatic pressure at full capacity.
3. Weirs shall be located inside the tank to trap sediments.
4. Tank shall include catwalk for inspection.
5. Intake and outlet valves shall be properly located and capable of connecting to the header and discharge piping.
6. A side hatch shall be conveniently located to facilitate clean out of the Tank.
7. The tank shall be equipped with all safety equipment required by OSHA, the Owner and regulatory agencies having jurisdiction.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Dewater trenches and excavations when ground or surface water is encountered in the installation of pipe, foundations, structures, or appurtenances.
- B. Furnish all piping, pumps, electrical systems and equipment, well pointing equipment, materials and labor required to properly well point or sump excavations in order to eliminate ground and surface water or precipitation from entering the excavation area during construction.

3.02 PERFORMANCE

- A. All water removed from the trenches or excavations by pumping, bailing, siphoning, well-points, or other means shall be disposed of in such a manner so as to avoid interference with wetlands, environment, plant operations, pedestrian and vehicular traffic and so to prevent damage to persons or property.
- B. All dewatering and discharge pipes and hoses which cross traveled roadways shall be placed in such a manner so as to eliminate any disruption of traffic flow. If so, ordered by the Engineer, the Contractor shall place the pipes and hoses in shallow trenches that will then be plated over. All header pipes shall be buried below existing roadway grade at driveways in order to maintain access to driveways.
- C. Unless otherwise permitted, groundwater encountered within the limits of excavation shall be depressed to an elevation not less than twelve inches below the bottom thereof before pipe laying or concreting is started, and shall be so maintained until concrete and joint material have attained adequate and specified strength. Dewatering operations shall be continuous (24 hours per day, 7 days per week) unless otherwise noted on the Contract Drawings. Dewatering operations shall be continued until the entire structure is backfilled to the grades required by the Contract Documents.
- D. The Contractor shall not discharge water from dewatering operations directly into any live or intermittent stream, channel, wetlands, surface water or storm sewer without the approval of the appropriate regulatory agency.
- E. Water from dewatering operations shall be treated by chemical treatment, physical treatment, filtration, settling basins, or other agency approved methods to reduce the amount of contaminants, sediment, and/or pollution contained in the water to allowable levels, as determined by the governing agency.
- F. Water from dewatering operations shall be conveyed to approved discharge location via suitable hose or piping. Hose and pipe shall be in new or like-new condition with no visible leaks. Water shall not be discharged to flow along pavement or ground.

- G. Upon completion of the portion of the work wherein the operations have been performed, the Contractor shall remove from the catch basins, sumps, ditches or water courses, all mud, silt, debris and other accumulations discharged to these various locations. The Contractor is responsible for leaving them in a condition similar to that which existed prior to his operations to the satisfaction of the regulatory agency. Proper control measures shall be employed, to minimize siltation and erosion in and adjacent to the area of the Work at all times.
- H. Locate dewatering pumps as far as possible from residential structures. The pumps shall be housed in noise suppression enclosures. If the operation noise levels, as determined by the Engineer, are still excessive, the Contractor shall, at the discretion and direction of the Engineer, apply damping compound to the external portion of the enclosure.
- I. The Contractor is hereby advised that during the dewatering process, in some instances, as directed by the Engineer, the quantity of water to be discharged will have to be limited so that flooding will not occur.
- J. Dewatering shall continue as required to avoid floatation to structures until completed, unless other positive measures, such as flooding sleeves, can be used.

3.03 PROTECTION

- A. Provide adequate protection from the effect of possible uplift due to storm or groundwater where buoyancy might lift installed work or cause joint or structure failure during construction. Provide back-up equipment where pump failure could result in damage to installed work.
- B. Protect the interior of installed work from the entering and accumulation of liquids, ice, and snow. Immediately remove and dispose any accumulation that may occur.

3.04 CLEANING

- A. Upon completion of all work, remove from the gutters, catch basins, drains, and manholes all debris and other accumulations, leaving them in a condition equal to or better than that, which existed prior to the work. Restore any pavement, shoulder or other areas disturbed or damaged by the installation of the dewatering system.

3.05 3.05 – QUALITY ASSURANCE

- A. Inspect all locations where water from dewatering activities is being discharged daily. If contamination is suspected, notify the Owner and permitting agency immediately. Evidence of contamination includes oil sheen, discoloration, odor, or any knowledge of pollutants. Submit written logs documenting these inspections.

END OF SECTION 312319

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PART 1 - GENERAL

1.01 BRIEF PURPOSE OF PROJECT / GENERAL

- A. The purpose of the project is to install a new parallel gravity sewer across the project site to allow for the construction and connection of future development as well as to provide additional capacity within the sewer system..
- B. All work shown and specified in the Contract Documents shall be the work of this Construction Contract. The Owner does not anticipate awarding other prime contracts for the project as shown.
- C. This Section provides an abbreviated summary of the work for the Construction Contract associated with the Owner's program to construct the project.

1.02 NOMENCLATURE

- A. Where the terms "Engineer/Architect", "Architect/Engineer", "Engineer", or "Architect" are used throughout these Contract Documents, they shall mean the firm of H2M architects + engineers as may be abbreviated by H2M or H2M Group.
- B. The terms "Contractor" and/or "Prime Contractor" where used shall refer to the individual or company who has entered into an agreement with the Owner to perform the work contained within these Contract Documents. The lack of word capitalization shall be incidental.
- C. Where the terms "owner" or "owner's construction representative" are used, they will be defined as a person selected by the owner, or the actual owner.

1.03 ABBREVIATED SUMMARY OF CONTRACT G WORK

- A. Furnish all labor, equipment, materials, tools, means, methods, and incidentals necessary to complete the Work as required by the Contract Documents for this Construction Contract. Each contractor shall coordinate, through the Owner/Engineer, the work of their contract with the work by others.
- B. This following abbreviated summary is provided in order to briefly describe the work covered by the Contract Documents for this Construction Contract. It is not all inclusive of the work under the Contract.
- C. The work includes, but is not limited to, the following:
 - 1. The Installation of approximately 155 LF of new 12-inch diameter gravity sewer encased in concrete, across the project site offset approximately 3-feet to the south parallel to the existing gravity sewer.
 - 2. New gravity sewer shall be connected to the existing sewer on one end and capped at a new structure on the other end.
 - 3. Installation of gravity sewer service laterals as shown in the contract documents.
 - 4. Testing
 - 5. Restoration
 - 6. Demolition and removals as shown,
 - 7. Maintenance and Protection of pedestrian and vehicular traffic
 - 8. Yard piping, buried valves, and fittings
 - 9. Preliminary site work including: utility mark-out, erection of safety fencing, erosion control facilities, clearing and grubbing.
 - 10. Project closeout submittals.
 - 11. All other work shown and specified within the Contract Documents for Contract

1.04 PARTIAL LISTING OF SPECIFIC CONTRACT REQUIREMENTS

- A. The Contract Documents detail the work included in the Contract. Related requirements and conditions covered by the Contract Documents include, but are not limited to, the following:
 - 1. Adherence to work restrictions as specified in Section 011400. Such restrictions include, but are not limited to:
 - a. Guidelines and requirements of the "Owner"
 - b. Guidelines and requirements of the Suffolk County Department of Health Services (SCDHS).
 - c. Local laws and ordinances of the Town of Riverhead.
 - 2. The General Contractor shall comply with the requirements of Section 312316.13 - Trenching. The cost associated with test holes and utility mapping shall be as specified therein, and is subject to change based on conditions existing at the time of construction.

1.05 PARTIAL LISTING OF OVERALL CONTRACT REQUIREMENTS

- A. The Contract Documents detail the work included in the Contract. Related requirements and conditions covered by the Contract Documents include, but is not limited to, the following:
 - 1. Debris removal and daily and final cleaning up.
 - 2. Product and equipment storage and handling requirements.
 - 3. Site safety in accordance with all applicable federal, state, and local regulations.
 - 4. Excavation, backfill and removal and offsite disposal of surplus and/or unsuitable materials
 - 5. Coordination with Property Owner's dewatering operations.
 - 6. Maintenance and Protection of traffic
 - 7. Sediment and Erosion control
 - 8. Project submittals, meetings, professional photographs, testing services, work plans, schedules, shop drawings, closeout procedures and documents, manuals, as-built drawings, and final commissioning of the work shall be provided as required by the Contract.

1.06 OWNER SUPPLIED PRODUCTS AND UTILITIES

- A. The Owner will not be supplying equipment, labor, or tools for the project.

1.07 EXISTING CONDITIONS

- A. The Drawings show certain information that has been obtained by the Owner regarding various pipelines, utilities and structures that exist at the location of the project both below and at grade.
- B. The Owner and the Engineer expressly disclaims all responsibility for the accuracy or completeness of the information given on the Drawings with regard to existing facilities.
- C. In the case where the Contractor discovers an obstruction not indicated on the Drawings or not described via specification reference, then the Contractor shall immediately notify the Engineer of the obstructions' existence.
- D. The Engineer will determine if the obstruction is to be relocated or removed.
- E. Compensation for this extra work will be paid for in accordance with the provisions in the Contract for "Extra Work".

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 011100

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Site access and control of areas outside of site.
- B. Contractor use of the premises.
- C. Contractor storage, parking and deliveries.
- D. Work hours, employee conduct and miscellaneous employee requirements.
- E. Contract requirements related to maintaining Owner's current operations and excess inspection required.
- F. Suggested construction sequence.

1.02 SITE ACCESS AND CONTROL

- A. The Contractor shall use the designated entrance to the site as shown on the drawings. If no site entrance is designated, the Contractor shall use an entrance designated by the Owner's Construction Representative.
 - 1. The Owner may permit, solely at the Owner's discretion, the temporary use of another entrance for site access.
 - 2. The Owner will only review requests made by the Contractor for an exception to the designated site entrance if made in writing at least 72 hours in advance of each of the times desired for use.
- B. The Contractor is to maintain the entrance area clear of materials, vehicles and any other obstacle or debris. Failure to do so will result in a minimum back charge of \$750 per occurrence.
- C. The site is within a commercial business district. The Owner intends to be a good neighbor. The Contractor shall not close any road for any period in time other than that defined under their road work permits. Take whatever measures are necessary to not cause any inconvenience to the area's residents and business owners.
- D. The Contractor is responsible to employ methods to prevent construction materials and/or debris from leaving the site. The Contractor is responsible to routinely monitor the areas surrounding the site during the day as well as at the end of the work-day and to immediately clean up any area to its previous condition.
- E. The Contractor shall employ methods to prevent the transmission of dirt from vehicles driving on exposed areas of the site from reaching the surrounding roadways. The Contractor will be responsible to immediately clean the roadway, should the measures being taken by the Contractor not satisfactorily control the transmission of any dirt to the roadway.
- F. Any damages to areas outside the site, spills of soil, liquid, or any other material shall immediately be repaired, cleaned and restored to its previous condition.
- G. The Contractor shall comply with all state and local requirements for allowable weight limits of vehicles on all roads.
- H. The Owner reserves the right to back charge the Contractor for all costs associated with maintaining the grounds as well as maintaining areas outside the site, which may be disturbed

by the Contractor should the Contractor fail to maintain or repair the aforementioned in a condition acceptable to the Owner.

- I. The Contractor shall not close any road for any period in time unless approved ahead of time by appropriate road agency. The Contractor shall take whatever measures are necessary to not cause any inconvenience to the area's residents.
- J. The Contractor shall maintain the premises in a safe condition throughout the construction period. Compliance with OSHA regulations and site safety shall be the responsibility of the Contractor as it relates to work of the Contract. The posting of all applicable OSHA safety signs shall be the responsibility of the Contractor.
- K. Contractor shall be responsible for protecting private property. All existing buildings, structures, shrubs, trees, lawn fixtures, sculptures and misc. equipment shall be protected at all times. Any removals or relocation of said objects, if allowed shall be as directed by the Engineer or District. Contractor shall protect all of the physical structures, property and improvements from damage by their Work and shall immediately repair or replace damage caused by construction operations, employees or equipment employed by the Contractor. All labor, materials and equipment and outside contractors that are employed by the Owner to repair damage caused by the Contractor shall be billed to the Contractor directly or withheld from money due the Contractor for work already completed.
- L. Keep all existing driveways, roads, and parking areas free and clear of materials and equipment. Do not unreasonably encumber the work area with materials and equipment.
- M. Immediately remove excess excavated material or relocate to areas on the site requiring placement of fill. Do not stockpile excess material.
- N. The Contractor is responsible for cleaning up the work area. Failure to maintain a clean work site daily, will result in others performing the work and the Contractor being back charged for the cleaning cost plus construction administration fees.
- O. Do not discard or dispose of any waste on-site.
- P. The Contractor shall be responsible for managing dust.

1.03 CONTRACTOR USE OF THE PREMISES

- A. Premises, for the purpose of this Contract, shall mean the site, buildings and other structures located within the property line or in any temporary or permanent construction easements identified on the plans.
- B. The Contractor shall use and manage the premises and the associated construction activities as follows:
 - 1. To not hinder the Owner's ability to operate their facilities. _____
 - 2. To allow for stockpiling of construction material and debris without any significant hardship, as defined by the Owner's Construction Representative, on the Owner or other contractors.
 - 3. To allow for the stockpiling of excavated soil and imported fill, when called for, without any significant hardship, as defined by the Owner's Construction Representative, on the Owner or other contractors.
 - 4. To allow utility companies to install their work.
 - 5. To allow for the delivery of equipment and materials by independent trucking companies by leaving enough space for backing in and out of areas.

6. To allow for the safe, unimpeded travel way of the Owners vehicles, Owner's Construction Representative's vehicles, Engineer's vehicles, construction vehicles and heavy construction equipment about the entire site.
- C. The Contractor shall be responsible for protecting Owner's property. All existing buildings, structures, shrubs, trees, lawn fixtures, sculptures and misc. equipment shall be protected at all times. Any removals or relocation of said objects, if allowed shall be as directed by Owner's Construction Representative.
- D. The Contractor shall protect all of the physical structures, property and improvements upon the site from damage by their Work and shall immediately repair or replace damage caused by construction operations, employees or equipment employed by the Contractor. All labor, materials and equipment and outside contractors that are employed by the Owner to repair damage caused by the Contractor shall be billed to the Contractor directly or withheld from money due the Contractor for work already completed.
- E. Keep all existing operations areas, driveways, roads, and parking areas free and clear of materials and equipment. Do not unreasonably encumber the site with materials and equipment. Confine stockpiling of excess excavated material, materials and equipment to areas selected under the Site Utilization Plan or as designated by the Owner's construction representative. Locate storage sheds and trailers to areas designated in the plan or by the Owner's Construction Representative.
- F. Immediately remove excess excavated material or relocate to areas on the site requiring placement of fill. Do not stockpile excess material on the site without written approval of the Owner's Construction Representative.
- G. The construction site space is limited and it shall be the General Contractor's responsibility to manage the site during the entire construction period with input from all concerned parties as to meeting their needs. Equal consideration of the needs of others with that of the Contractor's shall be provided as judged by the Owner.
- H. The Contractor is responsible for cleaning up their own materials and debris. Failure to maintain a clean work site daily, will result in other performing the work and The Contractor being back charged for the cleaning cost plus construction administration fees.
- I. Do not discard or dispose of any waste on-site.
- J. Open fires will not be permitted on the site.
- K. The Sitework Contractor shall employ erosion control measures to protect wetlands located adjacent to the work where shown on the Drawings and as required by regulatory agencies.
- L. Install erosion control measures as indicated in the Contract. The Contractor shall confine stormwater runoff to the site.
- M. Dewatering is anticipated. Property Owner is to provide all required dewatering operations. Contractor to coordinate with owner's dewatering operations as needed to facilitate the work of this contract.
- N. The General Contractor shall be responsible for managing dust as specified in Section 015719.

1.04 CONTRACTOR STORAGE, PARKING AND DELIVERIES

- A. Contractor must provide exterior storage containers when required. Final location of storage container shall be determined by the Owner.

- B. Do not unreasonably encumber the premises with materials and equipment. Do not store material in existing buildings. Store all equipment and materials to allow the Owner's employees to operate and conduct their business safely.
- C. Confine premise storage areas to locations designated by the Owner. Immediately repair or replace damaged facilities to the satisfaction of the Owner and to a condition that existed before the damage occurred as determined by preconstruction photographs, or if photographs are unavailable, to that deemed by the Owner.
- D. No materials storage will be permitted within the buildings at any time during construction.
- E. Storage of chemicals and paint materials shall be outside the existing or new structures and shall follow manufacturer's storage/handling guidelines.
- F. Compressed gas containers shall be properly stored and secured per OSHA, to the satisfaction of the Owner. Failure to do so will result in a \$250 back charge, per occurrence.
- G. Contractor shall provide minimum of 48 hours advance written notice to the Owner's Construction Representative for deliveries of materials, site visits by inspectors, manufacturer's representatives or any other occasion that impacts the use of the site. Contractor shall be responsible for any costs that are incurred by the owner, for failure to meet previously agreed upon appointments or work schedules.
- H. Deliveries sent to the Owner will not be signed for or unloaded by the Owner. They will be directed to the construction site and if no employee is on site, the delivery will be rejected, at the contractor's expense.
- I. Night deliveries of equipment (past the designated quitting time) will not be permitted. Do not schedule trucking companies to deliver equipment or wait for the job site to open. Delivery trucks shall not obstruct the site entrance, shall not sit within the neighborhood causing an obstruction or perceived nuisance, nor be left idling on or off the site for any period of time.

1.05 WORK HOURS, EMPLOYEE CONDUCT AND MISCELLANEOUS EMPLOYEE REQUIREMENTS

- A. The Contractor will be permitted to schedule working days and hours as specified in the General Terms and Conditions, if no times are specified therein then the work hours shall be Monday - Friday 8:00 am - 4:00 pm.
- B. Employees are to act in a professional manner. Any employee using inappropriate language or who is disruptive to the work environment will be banned from the site.
- C. Proper work attire is required. Shirts are to be worn at all times and no short pants are permitted.
- D. Employees shall not converse with local residents or Owner's employees.
- E. Any employee found under the influence of any drug or alcohol will be banned from the site.

1.06 SUGGESTED CONSTRUCTION SEQUENCE

- A. The following is one suggested general, not all-inclusive, sequence of construction that may be used to complete all the work under the Contract within the time specified.
- B. Since permit levels of treatment must be maintained during construction, then certain existing process equipment and units cannot be taken offline until new facilities are placed into permanent, fault free operation.

- C. Work restrictions may be noted throughout the suggested sequence provided below. The Contractor shall comply with all noted work restrictions that appear.
- D. Major areas of process and operations control that are required to be maintained are as follows:
 - 1. Existing treatment process must remain in service until the new/replacement treatment process is completely installed, tested and accepted by the Engineer.
 - 2.
- E. The following suggested sequence is provided for information only:
 - 1. Site utility mark-out
 - 2. Obtain approval of all new equipment (piping, valves, etc.) required to install the complete sewer extension. Obtain delivery dates for new equipment.
 - 3. Layout the location of the new sewer main and service lateral stub locations.
 - 4. Install sheeting for excavation work.
 - 5. Install and test new gravity sewer pipe
 - 6. Install service lateral stubs on existing sewer in excavated areas.
 - 7. Install steel reinforcement and cast-in-place concrete encasement around parallel sewer pipes.
 - 8. Backfill remaining trench area above new concrete pipe encasement
 - 9. Complete all remaining contract work.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 011400

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Allowance pricing for the following items:
- B. This Section covers the requirements for use of the cash allowances listed above contained in the proposal (Bid Forms, Price Schedule) and included in the Contract Price bid by the Contractor and defines and stipulates the charges that will be paid for out of the stipulated allowances.
- C. The Contractor shall include the cash allowances stipulated in this Section in the amount bid (Base Bid).
- D. Eligible costs described in this Section, and Sections referenced herein, will be the only costs paid for out of the stipulated allowances.
- E. All other costs associated with the project as specified and/or shown, including but not limited to the delivery, installation and all Contractor overhead and/or collateral expenses are to be distributed among the other portions of the work and shall be included in the lump sum base bid.

1.02 SUBMITTALS

- A. Make all submissions under the provisions of Section 013300.
- B. For each type of product/material specified to be furnished under allowance pricing provide documentation of the unit pricing on manufacturer's letterhead certifying pricing of the product/material.
- C. Submit additional backup information to substantiate the invoiced amount(s) as the Engineer may require for review and approval, prior to order or payment of item.
- D. Provide written breakdowns for extra work as the Owner may require.

1.03 CHANGES TO STIPULATED (CASH) ALLOWANCE

- A. If the actual cost of services differs from the cash allowance, then the Contract Price will be adjusted accordingly.

1.04 PAYMENTS TO BE MADE OUT OF "INDEPENDENT LABORATORY TESTING ALLOWANCE"

- A. **Contract S** - Include the cash allowance of \$5,000(FIVE THOUSAND Dollars and Zero Cents) in the amount bid for independent testing laboratory services specified in Section 014500.
- B. The actual invoiced charges of the testing laboratory, including testing companies where called for, incurred for field and laboratory tests, as specified only in Section 014500 - Quality Control, shall be paid for out of the cash allowance.
 - 1. Any other requirement specified herein throughout these specifications for providing the services of an independent testing laboratory, underground utility location company, or similar outside independent service are to be borne by the Contractor.
 - 2. All costs for quality control services are to be included as part of the Contract Price (as-bid).
- C. One (1) week prior to each partial payment, submit a certified invoice from each company listing and detailing the total costs incurred since the last invoice.

1. The invoice shall be on company letterhead signed by an authorized representative of the company and shall include man-hours, tests conducted, date of tests and associated costs and fees.
 2. Payment for costs will not be made unless the information is provided and certified. Payment for costs will not be made unless the typed test data reports have been received by the Engineer.
 3. In the case of pipe toning, flags must be set to delineate the route of underground pipes and utilities prior to submission of partial payment request.
- D. If in the event test results (provided by the independent testing laboratory) show non-compliance with these specifications, then at the option of the Contractor and only with the approval of the Owner, he may re-test samples to verify the original test results at his/her own expense.
- E. Costs for re-testing failed components of the work, when ordered by the Engineer, will not be paid for out of the cash allowance and will be directly borne by the Contractor.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 012100

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work under this Section specifies the procedures used to process partial payments and the Final Payment Request.

1.02 TIME FOR COMPLETION

- A. Inasmuch as the provisions of the Contract relating to the time for performance and completion of the Work are for the purposes of enabling the Owner to proceed with the construction of a public improvement in accordance with a predetermined program, and inasmuch as failure to complete the Work within the period herein specified may result in damage or loss to the Owner, time is of the essence of the Contract.
- B. Time for completion of the Work shall be in accordance with that stipulated in the Contract Documents.
- C. The date for completion will be calculated from the date shown on the Notice to Proceed. The Contractor shall execute the Work with diligence from day to day, and complete it within the time fixed.
- D. For the purpose of defining the date of substantial completion, the Project will be considered complete when all Work covered by the Contract has been performed and all installations and equipment have been tested and are ready for permanent use. Contractor shall provide a copy of the final Certificate of Occupancy from the AHJ prior to issuance of the final payment. Removal of the Contractor's plant and equipment and other minor adjustments which do not prevent use of the Project will not be a factor in establishing the date of substantial completion.
- E. Notwithstanding the foregoing, the Engineer will establish the date of substantial completion when the project is accepted and ready for operation, and no large or major items of work are as yet outstanding. At such time, the Engineer will issue a punch list, itemizing the items of work remaining. The punch list will include "minor" items only, as defined solely by the Engineer. Any prior punch lists, which include "major" or significant items, as defined by the Engineer, shall not be a criterion in establishing the date of substantial completion.

1.03 PARTIAL COMPENSATION

- A. At the Owner's discretion, the Contractor may receive compensation for materials and products delivered to the site yet not installed providing:
 - 1. A canceled check or paid bill from the supplier is submitted to the Engineer indicating that the Contractor has paid the supplier for the material or equipment.
 - 2. The material or piece of equipment is properly stored and protected from the elements and/or vandalism in accordance with the manufacturer's written requirements for long term storage.
 - 3. A certificate of insurance is provided for the material or piece of equipment in the event of a fire, vandalism, theft, etc.
 - 4. A bill of material is delivered to the Engineer at the time of delivery itemizing the subject material or equipment. Payment will be made for on-site material and/or equipment in the amount of 80% of the gross amount of the paid invoice. This payment will be subject to the normal retainage of the partial estimate.
 - 5. The Engineer has agreed to the pre-purchasing of the materials.
- B. The Contractor may not receive compensation for materials and products stored in the Contractor's yard or shop unless permitted by the Owner.

1.04 APPLICATIONS FOR PAYMENT

- A. The Contractor shall review the percentage of work completed during the payment period with the Engineer, based on the bid items in the proposal. The Engineer shall make the final decision on the percentage of work completed.
- B. The form of application for payment shall be as provided by the Owner.
- C. Submit one (1) copy of each payment application, completed, signed and notarized.
- D. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- E. The payment application shall include a Contractor Invoice and an Owner Claim Voucher.
- F. Provide completed Labor Affidavit Form for each pay period included in the certified payroll reports for each payment application for both the contractor and any subcontractor(s).
- G. Submit payment application to Engineer no later than the first day of each month. Payments received after the first day of each month shall be reviewed and processed after the first day of the following month. Only one application for payment will be reviewed and processed each month.
- H. Submit certified payroll receipts for all workers and subcontractors. Payroll receipts shall be submitted with every application for payment. All payroll receipts shall be certified correct and notarized by a Notary in the State of New York. Application for Payment will not be processed unless all payroll receipts are received.
- I. Contractor shall pay all workers and have all subcontractors pay all workers the prevailing New York State Wage Rates.
- J. Contractor shall provide proof of OSHA certifications for all workers prior to payment approval.
- K. Owner may conduct on-site interviews with all workers to verify payments of prevailing wage rates are enforced.
- L. The Engineer shall submit the documentation along with an Engineer's Payment Report to the Owner for payment.
- M. Retainage in the amount of 5% will be held from each partial payment. Retainage will only be released upon full completion of the project and will be included in the final payment.

1.05 ACCEPTANCE OF FINAL PAYMENT REQUEST

- A. The Contractor shall be conclusively deemed to have accepted the Final Payment Request as a correct statement of the total liability of the Owner and of the compensation paid and to be paid to the Contractor by the Owner unless within seven (7) days after delivery of their copy of the Final Payment Request to them, the Contractor shall return such copy to the Owner together with a statement of their objections to such request and of any claim for damages or compensation in excess of the amounts shown on the Request. The acceptance by the Contractor of the Final Payment Request approved by the Owner shall constitute a release and shall discharge the Owner from all further claims by the Contractor arising out of or relating to the Contract, including but not limited to, a release from all impact costs.

1.06 SCOPE OF PAYMENTS

- A. The Contractor shall receive and accept the compensation as herein provided, in full payment for furnishing all materials, labor, tools, and equipment and for performing all work contemplated and embraced under the Contract, also for all loss or damage arising out of the nature of the Work or from the action of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered during the prosecution of the Work, and for all risks of every description connected with the prosecution of the Work, until its final acceptance by the Owner, also for all expenses incurred by, or in consequence of, the suspension or discontinuance of the said prosecution of the Work as herein specified, and for all actual or alleged infringements of patent, trademark, or copyright, and for completing the Work and the whole hereof, in an acceptable manner, according to the Plans, Specifications, and other Contract Documents. The payment of any partial or final estimate shall in no way or in no degree prejudice or affect the obligation of the Contractor, at their own cost and expense, to renew or replace all defects and imperfections, or damages. The Engineer shall be the judge, and the said Contractor shall be liable to the Owner for failure so to do.

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

NOT USED.

END OF SECTION 012900

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Schedule of Values

1.02 SCHEDULE OF VALUES

- A. Refer to Specification Section G26 of the General Conditions.
- B. Submit for approval prior to the start of the work a Schedule of Values that indicates a breakdown of the labor, materials and equipment and other costs used in the preparation of the bid. This schedule shall be in sufficient detail to indicate separate figures for such items as excavation, concrete, equipment and all other items making up the lump sum price. The cost breakdown shall be separately itemized for each lump sum bid item in the project.
- C. Where the cost breakdown includes items for bond payment, insurance payment, job set-up, or job mobilization, these items will be paid based on paid invoices and copies of cancelled checks.
- D. Submit a Schedule of Values to the Engineer for review and approval within fifteen (15) calendar days from the date shown on the Notice to Proceed.

1.03 FORM OF SUBMITTAL

- A. Submit typewritten Contract Cost Breakdown on AIA Form G703 - Application and Certificate for Payment Continuation Sheet or EJCDC 1910-8-E. The Engineer reserves the right to revise the form or provide a form prepared by the Engineer.
- B. Use the Table of Contents of the Contract Specifications as a basis for format for listing costs of work for Sections under Divisions 01-48 as sections apply to work. Not all Sections need be assigned a breakout price as determined by the Engineer.
- C. Identify each line item with number and title as listed in Table of Contents.
- D. Provide dollar values for each line item for labor, overhead, profit, material, and equipment components for each category of work if requested by the Engineer.
- E. List quantities of materials specified under unit price allowances.
- F. The Schedule of Values, after approval by the Engineer, shall be the basis for the Contractor's Application for Payment.
- G. The first Application for Payment will not be reviewed prior to an approved breakdown.

1.04 PREPARATION OF SCHEDULE OF VALUES

- A. In addition to the above, provide a separate line item cost for each of the following items which shall be supported by proof where requested by Engineer:
 - 1. Performance and payment bonds.
 - 2. Insurance.
 - 3. Mobilization and Demobilization (Amounts shall be equal in value).
 - 4. Temporary facilities and measures as specified in Section 015000.
 - 5. Project Coordination Meetings as specified in Section 013100.
 - 6. Preparation of the Project Construction Schedule, and updates, as specified in Section 013216.

7. Preparation of Weekly Schedules as specified in Section 013100
8. Rubbish removal and daily cleaning up. (Provide a total dollar amount and a daily rate for each calendar day during the contract period.)
9. Construction photographs as specified in Section 013233.
10. All Cash Allowance items as contained in Section 012100.
11. For the Manufacturer's Field Services item, provide the total amount of days specified throughout the specifications at a daily rate of \$1000. Provide a listing by Section number.
12. On-site, full time superintendent starting on the date of the Notice To Proceed and ending on the date that all punch list items are completed, which for the purposes of the Schedule of Values, shall be the contract completion date.
13. Exploratory digging as specified in Section 023219.
14. Underground utility mapping services as specified in Section 023219.
15. Surveyor used for layout.
16. Record Drawing retainage amount specified in Section 017839.
17. Final cleaning.

B. Show total costs including overhead and profit.

C. Provide additional details and data to substantiate the cost breakdown as requested by the Engineer.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 012973

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Work of this Section includes:
 - 1. Requests for Interpretation or for information
 - 2. Coordination between contractors, if applicable
 - 3. Administration of subcontracts
 - 4. Coordination of work with utility companies and the Owner/Engineer
 - 5. Communication and coordination requirements
 - 6. Qualifications of Contractor's job site superintendent
- B. Site staffing requirements for the Contractor's superintendent are also specified herein, the costs for which shall be included in the Contract price.

1.02 REQUEST FOR INTERPRETATION OR INFORMATION

- A. The Contractor shall use the Request for Interpretation/Information Form included within this Section when the Contractor feels that additional information is needed to perform the work of the Contract.
- B. The Engineer will respond to requests utilizing the form provided herein.
- C. The Engineer's verbal response(s) to the Contractor's formal requests, if provided, shall not constitute an official response and if acted upon by the Contractor are done so at the Contractor's own risk and liability and shall not be subject to claims for additional compensation.
- D. The original of the form must be signed and provided to the Engineer's project manager
- E. The Engineer will respond in writing to the request as soon as possible.

1.03 SUBCONTRACTOR ADMINISTRATION AND COORDINATION

- A. Terms and conditions of the Contract shall be binding upon each subcontractor.
- B. Furnish each subcontractor and major equipment vendor at least one (1) copy of the Plans and Technical Specifications.
- C. Provide at least one (1) copy of each approved shop drawing to each subcontractor whose work may depend upon the contents of the shop drawing submittal. The Owner reserves the right to stop all work, without claims for delay, until such time as appropriate subcontractors are furnished with appropriate shop drawings.
- D. The Contractor shall sequence and schedule the work of subcontractors. Coordinate construction and administration activities of subcontractors. The Engineer and Owner will not accept telephone calls, facsimiles or office visits from any subcontractors on the project. Subcontractor and vendor questions and clarifications shall be directed to the Engineer by the Contractor.
- E. The Contractor's on-site project superintendent shall inspect all the work of all of his/her subcontractors, as it is being constructed. The Contractor's subcontractor shall not be permitted to do any work on the site without the Contractor's job site superintendent also being there to inspect the work as it is being performed.

1.04 UTILITY COORDINATION

- A. Comply with the requirements of 16 NYCRR Part 753 - Protection of Underground Facilities. Submit a letter stating the case number.
- B. Comply with the utility coordination requirements contained in the General Conditions.

1.05 PUBLIC/PRIVATE UTILITIES

- A. Notify all public and private utilities in accordance with Article 20, Section 322-a of the New York State General Business Law for location and markout of existing utilities in the vicinity of the work.
- B. Repair all utilities damaged during the Work to the standards and approval of the respective utility at no cost to the Owner.

1.06 SPECIFIC COORDINATION REQUIREMENTS

- A. Sequence and schedule work so as not to interfere with the work by others. Coordinate the work of this Contract with the work by others. In case of conflicts due to improper coordination by the Contractor, the Owner/Engineer's resolution will be final. No compensation will be awarded for extra work required to resolve conflicts.
- B. Coordinate space requirements, supports, and installation of mechanical, electrical and plumbing work which may be indicated diagrammatically on the Drawings. Follow routing shown for pipes, ducts, and conduit as closely as practicable. Place runs parallel with building lines. Utilize spaces efficiently to maximize accessibility for other installations, maintenance, and to facilitate repairs.
- C. In finished areas, except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of all fixtures and outlets with finish elements and work by all other trades.
- D. Coordinate the work by complying with the following:
 - 1. Email Account: Each Contractor shall maintain an email account that shall be used to improve communication. An email shall not constitute a formal advisement regarding the terms and conditions of the contract. Email shall only be considered an informal way of notifying relevant parties of project related activities.
 - 2. Email List: Each Contractor, within five (5) calendar days from the Notice To Proceed, provide a list of email addresses for each major equipment supplier and local representative, if such exists. A contact person shall be provided for each email address.
- E. Project Coordination Meetings: Participate in and attend the Project Coordination Meetings as specified below:
 - 1. A minimum of two (2) project coordination meetings will be held at the Owner's office or project site.
 - 2. The meetings will be held when so called for by the Engineer.
- F. The Contractor shall sequence and schedule work so as not to interfere with the work by others and to afford each Contractor the time to complete their contractual obligations with the Owner. Coordinate the work of this Contract with the work by others. Coordination includes, but is not limited to, the following:
 - 1. The Contractor shall annotate on each of his/her own shop drawings and submittals, information that is relevant to the work of others or where potential conflicts in the installed

- work may occur. The Contractor shall "bubble" in green ink the area of potential conflict so as to alert the reviewer.
2. To properly coordinate the work, the Contractor shall provide the Engineer with a list of all shop drawings that they will be submitting. This list must be provided to the Engineer within fifteen (15) calendar days from the date of the Notice to Proceed.
 3. In case of conflicts due to improper coordination by any Contractor, the Owner/Engineer's resolution will be final. No compensation will be awarded for extra work required to resolve conflicts or to coordinate the work of all contracts.
 4. Coordinate space requirements, supports, and installation of mechanical, electrical and plumbing work which may be indicated diagrammatically on the Drawings. Follow routing shown for pipes, ducts, and conduit as closely as practicable. Place runs parallel with building lines. Utilize spaces efficiently to maximize accessibility for other installations, maintenance, and to facilitate repairs.
 5. In finished areas, except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of all fixtures and outlets with finish elements and work by all other trades.
- G. Shop Drawings and Submittals Coordination Procedure:
1. Immediately notify the Engineer should a purported conflict in the work be discovered so that the Engineer can investigate and take appropriate action.
 2. If a shop drawing was so provided by the Engineer and a conflict in the work was not brought to the attention of the Engineer, then the conflict shall be immediately corrected by the Contractor submitting the shop drawing.
- H. The Contractor shall also coordinate the work by complying with the following:
1. Construction Schedule: The Contractor shall provide a construction schedule as specified in Section 013216 - Construction Schedules.
 2. Weekly Schedule: By 3:00 PM of each Friday during the construction period, the Contractor shall fax or email a typed memo addressed to the Engineer/Owner's resident field engineer/inspector and designated office project manager summarizing the work for the following week. The memo shall also be faxed or emailed to each Prime Contractor's home office and the Owner. The memo shall briefly itemize the planned activities for the coming week. The memo shall also include a summary of expected material/equipment deliveries, concrete pours, utility tie-ins, excavated material removals and other heavy construction traffic that may impact the work activities for the coming week.
 3. Email Account: Each Contractor shall maintain an email account that shall be used to improve communication. An email shall not constitute a formal advisement regarding the terms and conditions of the contract. Email shall only be considered an informal way of notifying relevant parties of project related activities.
 4. Email List: The Contractor, within five (5) calendar days from the Notice To Proceed, shall provide a list of email addresses for each major equipment supplier and local representative, if such exists. A contact person shall be provided for each email address.
 5. W/MBE Utilization Plans: All Contractors shall provide a W/MBE Utilization Plan in accordance with the requirements contained in other portions of the Contract Documents, but in no case more than thirty (30) calendar days from the date of the Notice To Proceed.
 6. Work Plan: All Contractors shall within five (5) calendar days from the date of the Notice to Proceed, submit to the Engineer a type written work plan in bullet format of the sequence of construction activities from start to finish of construction. A facsimile will not be accepted. All work plans shall include a description of the different major phases of construction as pertaining to the individual construction contract. As a minimum each work plan shall include the tasks and subtasks specified in Section 013216 for the project schedule.
 - a. The Contractor's work plan shall be complete and shall address every phase of the scope of the Contract.
 - b. The Contractor shall then prepare a construction schedule as specified below using the work plans prepared by others and his/her own.

- I. Equipment and Startup Schedule: All Contractors shall also submit a preliminary equipment delivery schedule and a preliminary startup schedule for all equipment and systems being furnished under the Contract. This schedule shall be submitted within 30 calendar days from the date of the Notice To Proceed.
 - 1. Include an early and late date for each item.
 - 2. Indicate the time necessary to physically install and ready each item so that other work can be completed by other Prime Contractors.
 - 3. The Engineer/Architect may waive this schedule if the Contractor has adequately shown the information on the construction schedule, in the opinion of the Engineer/Architect.
- J. Project Schedule Coordination Meetings: The Contractor shall participate in and attend the Project Schedule Coordination Meetings as specified below:
 - 1. Up to three (3) project schedule coordination meetings will be held at the Engineer's or Owner's office as specified herein and in Section 01322.
 - 2. The meetings will be held when so called for by the Engineer.
 - 3. Each meeting may last up to eight (8) hours with one hour for lunch.
 - 4. The Contractor will prepare the final agreed version of the schedule and submit it to the Owner and the Engineer.
 - 5. The Engineer reserves the right not to hold these meetings if in his/her opinion they are not needed.
 - 6. The time associated with attendance at the Engineer's scheduled meetings shall be included in the lump sum bid and be subject to a credit of \$150 per hour for each unused hour that the Contractor choose to not attend.
- K.

1.07 CONTRACTOR'S JOB SITE SUPERINTENDENT

- A. The Contractor shall employ an on-site superintendent as specified herein below. He/She shall be a full-time employee of the Contractor.
- B. The Contractor shall name the job site superintendent within five (5) days of the Notice To Proceed. A letter to the Engineer shall be provided.
- C. He/She shall have the authority to sequence and schedule the work, and to staff the project, so as not to interfere with the work by others and to complete the work daily within the time so required.
- D. The Superintendent shall have a minimum of five (5) years of experience as a job site superintendent for projects of equal size and complexity.
- E. The superintendent shall not be a foreman or crew supervisor.
- F. The superintendent shall be qualified to perform the duties so required to successfully complete the work in accordance with the Contract Documents.
- G. All other construction superintendents shall be on the project site while work under his/her contract is being performed, either by direct forces or by subcontractors as stipulated above for subcontractor coordination.
- H. The superintendent shall speak English. If required by the Engineer, provide a resume for the proposed superintendent that shall be typed and shall list the qualifications of the superintendent. Prior to the Contractor assigning a superintendent to the project, he/she may wish to arrange an interview with the Engineer to determine the proposed superintendent's

ability to properly coordinate the work through the Owner/Engineer. The Contractor shall employ a superintendent acceptable to the Owner.

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REQUEST FOR INTERPRETATION/INFORMATION (RFI)

OWNER'S NAME: Riverhead Sewer District

PROJECT NAME & CONTRACT DESIGNATION: RDSD2403 - 203-213 East Main St Sewer
Improvement

CONSTRUCTION CONTRACT NO.: RDSD2403

Product, Item, or System:			
Request Date:		RFI No.:	
Specification Section:		Paragraph Ref:	
Contract Drawing Reference(s):			
Describe Request:			
Signed:	See Contractor's Attachments for Additional Description for Information		
Owner/Engineer Response:			
Engineer (Printed):	See Engineer's Attachments for Additional Information		
Engineer's Signature & Date		<i>Response Accepted By Contractor</i> <i>Contractor's Signature & Date</i>	
The Work shall be carried out in accordance with these supplemental instructions without change in Contract amount or Contract time for completion. Prior to proceeding with these instructions, indicate your acceptance of these instructions by signing where indicated and returning this form to the Engineer.			

END OF SECTION 013100

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Work of this Section includes the requirements for progress meetings.

1.02 PRE-CONSTRUCTION CONFERENCE

- A. The Contractor is required to attend the pre-construction conference at a location, date, and time selected by the Owner.
- B. The owner, a partner, or a corporate officer representing each Contractor shall attend the conference. The job site superintendent and office project manager for each Contractor shall also attend.
- C. The Engineer will prepare an agenda for the conference.

1.03 PROGRESS MEETINGS

- A. Progress meetings will be held approximately once every two (2) weeks during the project. The Owner may elect to hold meetings more or less frequently.
- B. At least seven (7) calendar days advance notice will be given by the Engineer or the date for the upcoming meeting will be set during the progress meeting.
- C. Attendance at progress meetings shall be mandatory. An amount of \$1,000 shall be deducted from the Contract Amount for each announced meeting not attended by the Contractor.
- D. The owner, a partner, or a corporate officer representing the Contractor shall attend each announced progress meeting. The job site superintendent and office project manager for each Contractor shall also attend.
- E. Subcontractors shall attend when requested by the Owner or Engineer at no cost to the Owner.
- F. Meetings will be conducted by Engineer at a location selected by the Owner, normally at or adjacent to the project site.
- G. The minimum agenda will cover:
 - 1. Review minutes of previous meetings.
 - 2. Identify present problems and resolve them.
 - 3. Plan work progress during next work period.
 - 4. Review the status of off-site fabrication and delivery schedule.
 - 5. Review shop drawings and submittal schedules.
 - 6. Review change order status.
 - 7. Review status of construction progress schedule.
 - 8. Coordinate access requirements.
 - 9. Other business related to the work.

1.04 OTHER MEETINGS

- A. Each Contractor shall attend special meetings which may be required or called for by Federal, State or Local authorities, utility companies, Owner, Engineer or any other firm, person or organization related to the project.

1.05 CONDUCTING MEETINGS

- A. General - This paragraph covers Owner and/or Engineer meetings with Contractor and/or his/her subcontractors. Neither Owner nor Engineer wishes to meet solely with a subcontractor and requests for such meetings will be discouraged. If a meeting is deemed necessary, every effort will be made to have Contractor attend. If, for some reason, circumstances do not allow such, the meeting may be held, minutes of the meeting will be sent to contractor and decisions on any major questions will be reserved until contractor has been consulted. Subcontractors may accompany contractor to meetings provided contractor notifies Engineer in advance.
- B. Chair - When Engineer/Owner attend meetings, Engineer, or his/her duly authorized representative, will act as chair. Should Owner-Contractor meetings be necessary, Owner will chair such meetings.
- C. Notices - Engineer or Owner will issue notices of meetings to all parties concerned and will note, thereof, who must attend and who may attend if they so desire. When a Contractor desires a formal meeting, make a request through Engineer. Except when Engineer determines that a prompt meeting is essential, all notices will be issued at least one week in advance of the meeting date.
- D. Agenda - All parties shall inform Engineer of items desired to be discussed and Engineer will notify all parties of all items to be considered. This is to allow each party to fully prepare for the meeting. This shall not be construed to mean that other items cannot be brought up at the meetings.
- E. Time Limits - It is the intent to hold productive and efficient meetings and to keep them as short as is reasonably possible. The Chairman will be the sole judge as to whether or not further discussion on any matter is warranted and all discussions shall cease when he/she so orders.
- F. Minutes - Minutes of meetings will be kept, written and distributed by the Chair or his/her duly authorized representative. Minutes of all meetings will be available upon request to the Chair.
- G. Conduct - It is the intent to conduct all meetings in an orderly manner, to reasonably discuss all items and to hear and observe the rights and opinions of all parties. The Chair will allow each party to speak, however, he/she reserves the right to order any individual to leave the meeting at any time for any reason.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 013119

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section specifies the requirements for preparing construction schedules and for keeping them up to date.
- B. Prepare a Gantt Chart type schedule and keep it up to date as specified hereinafter.
- C. All schedules shall be submitted in accordance with the requirements contained herein in Section 013300.
- D. Refer to Section 013100 regarding the requirements for attendance at Project Coordination Meetings and additional requirements concerning the submission of other project coordination and sequencing information.
- E. Refer to Specification Section G27 of the General Conditions.

1.02 SCHEDULE PREPARATION MILESTONE DATES & REQUIREMENTS

- A. The Contractor shall prepare Draft #1 Construction Schedule for presentation and discussion during Project Coordination Meeting No. 1.
 - 1. The Engineer will provide at least seven (7) calendar days written notice regarding the date of the first meeting.
 - 2. At the Engineer's discretion, Project Coordination Meeting No. 1 may immediately take place on the same date and directly following the Pre-Construction Conference. The Notice To Proceed will contain information regarding the Pre-Construction Conference and Project Coordination Meeting No. 1 should it be so decided by the Engineer.
 - 3. Draft #1 Construction Schedule shall be prepared as specified hereinafter.
 - a. The schedule shall show all the major and subordinate tasks necessary to complete the project in the specified time and interim milestones.
 - b. It shall allow adequate time for other Prime Contractors to complete their related work as best estimated by the Contractor. It being understood that the Contractor's allotted time for others to perform their work is non-binding and does not relieve the Contractor from completing all the work in the specified contract completion time in accordance with the Contract Documents. It also being understood that this is the Contractor's realistic best estimate of the time needed for others to complete their related work.
 - c. The schedule shall also show the dependencies and time allocated for each task.
 - 4. The date, place, and time for Project Coordination Meeting No. 2 shall be established at the first meeting, but in no case be more than ten (10) calendar days from the date of the first meeting.
- B. The Engineer, after the third meeting and as soon as possible, will make the agreed upon changes and provide final versions to all Prime Contractors for adoption as the Final Combined Construction Schedule.
 - 1. The final schedule shall be implemented by all Prime Contractors on a daily basis. All tasks and subordinate tasks shall be completed on schedule.
 - 2. Each Contractor shall increase resources as are needed to comply with the established milestone dates should the schedule start to lag.
- C. The Engineer's decision regarding the time allotted for a given task shall be final and each Contractor shall apply necessary resources to accomplish the work. Submission of a bid shall be intended to mean that the Contractor agrees that the determination is binding.

1.03 PRIME CONTRACTORS SCHEDULE TYPES

- A. Gantt Chart Type: The General Contractor shall prepare a Gantt Chart type schedule as specified hereinafter.

1.04 CONSTRUCTION SCHEDULE - GENERAL

- A. Coordinate the work and maintain the construction schedule. In the event actual progress begins to lag the schedule, promptly employ additional means and methods of construction to make up the lost time.
- B. Keep the construction schedule current and revise and resubmit as often as necessary to accurately reflect the conditions of the work, past progress and anticipated future progress.
- C. The construction schedule shall be completed, submitted, and deemed received by the Engineer prior to the first payment application.
- D. The schedule, when approved by the Engineer and the Owner, shall establish the dates for starting and completing work for the various portions of the Contract. It shall be the duty of the Contractor to conform to his/her own schedule and to perform the work within the time limits indicated. Failure to adhere to the approved schedule shall expose the Contractor to disputes, claims and additional costs incurred by others.
- E. Coordinate letting of subcontracts, material purchases, shop drawing submissions, delivery of materials, and sequence of operations, to conform to the schedule.
- F. Coordinate the construction schedule with the proposed schedules of the equipment suppliers and subcontractors.
- G. The schedule shall show the critical sequence items where new units must come online before existing facilities go offline, if applicable to the project. The schedule shall also show, in detail, the proposed sequence of the work and the estimated date of starting and completing each stage of the work in order to complete the project within the contract time.
- H. The schedule shall be plotted out in color and shall be 36-inch by 40-inch. It shall contain as many sheets as are necessary to show all rolled down tasks. Partially printed schedules will not be accepted. Each Contractor shall arrange to have it plotted on a color plotter suitable for the intended application.
- I. The schedule shall be plotted out in color and shall be 11-inch by 17-inch. It shall contain as many sheets as are necessary to show all rolled down tasks. Partially printed schedules will not be accepted. Each Contractor shall arrange to have it plotted on a color plotter suitable for the intended application.
- J. Prepare the schedule in a manner so that the actual progress of the work can be recorded and compared with the expected progress.
- K. The schedule shall use the following convention:
1. Tasks for the General Contractor in blue ink.
 2. Task links/task dependency in blue ink.
 3. Work by others in green ink.
 4. Milestone dates (zero duration) by a red diamond.
 5. The end date for each task and subtask at the end of a bar.
 6. The description of all major tasks within the bar. The bar shall be red.
 7. Critical path.

1.05 CONSTRUCTION SCHEDULE - CPM TYPE

- A. The schedule shall show, in detail, the proposed sequence of the work and the estimated date of starting and completing each stage of the work in order to complete the project within the contract time.
- B. Prepare the schedule in a manner so that the actual progress of the work can be recorded and compared with the expected progress.
- C. Coordinate the construction schedule with the proposed schedules of the equipment suppliers and subcontractors.
- D. Show the "critical path" of the project and task resources.
- E. The CPM schedule shall be prepared using Microsoft Project®, latest version.
- F. It shall be prepared by a qualified scheduler regularly engaged in the preparation of CPM construction schedules.

1.06 CONSTRUCTION SCHEDULE - GANTT CHART TYPE

- A. The schedule shall show, in detail, the proposed sequence of the work and the estimated date of starting and completing each stage of the work in order to complete the project within the contract time.
- B. Prepare the schedule in a manner so that the actual progress of the work can be recorded and compared with the expected progress.
- C. Coordinate the construction schedule with the proposed schedules of the equipment suppliers and subcontractors.

1.07 REVISION OF PROJECT PROGRESS SCHEDULE

- A. The Contractor shall evaluate and provide updated construction schedules monthly in accordance with job requirements. Each update shall be submitted to the Engineer for information purposes and be provided by the last Friday of every month.
- B. The Contractor shall modify his/her construction schedule to accommodate coordination of the construction contracts by the Owner/Engineer without claims for additional compensation or delay.
- C. The Engineer will provide an electronic version of the Final Combined Construction Schedule for use in keeping the schedule up to date.
- D. From time to time, and at stages deemed appropriate by the Engineer, the Engineer may issue updated schedules to reflect the project's status. The percent complete for each task may be shown, as determined by the Engineer.
- E. Refer to Supplementary Conditions – Sanitation, paragraph SC-4(F) for retainage withheld from monthly progress payments that are due to negative variance associated with the progress of the project.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 013216

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. The work of this Section includes survey work necessary to layout and construct the project. Refer to Article G55 for additional requirements.
- B. Project record documents shall be prepared as specified herein.
- C. This Section also specifies the requirements for documenting the location of underground pipelines of all sizes using digital photographs taken by the Contractor.

1.02 QUALITY ASSURANCE

- A. The Contractor shall employ a land surveyor licensed in the State where the project is located. The surveyor shall be acceptable to the Engineer in terms of experience and qualifications.
 - 1. Submit evidence of the surveyor's errors and omissions (professional liability) insurance coverage in the form of an insurance certificate.
 - 2. The surveyor shall maintain a minimum coverage of \$1,000,000 for professional liability.
 - 3. The Owner, Engineer, and Contractor shall be named as insurance certificate holders.
 - 4. A thirty-day cancellation notice shall be provided.
 - 5. Physical work shall not be performed until the certificate is provided and approved by the Owner.
- B. All instruments used on the project shall be of professional quality and in first class condition.
 - 1. All instruments shall have been calibrated by a manufacturer's service station within the last month from the date of first use on the job site.
 - 2. Submit certificate of calibration or paid invoice showing that the unit has been calibrated, if so required by the Engineer.

1.03 SUBMITTALS FOR REVIEW

- A. Submit name, address, and telephone number of Surveyor before starting survey work.
- B. Surveyor's professional liability insurance certificate.
- C. On request, submit documentation verifying accuracy of survey work.
- D. Submit a copy of the site drawing signed by the land surveyor showing locations of other benchmarks set by the surveyor, baseline location and offset hubs. If requested, the Engineer will provide a reproducible drawing or a drawing in digital format for use by the surveyor.

1.04 EXAMINATION

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Engineer of any discrepancies discovered.

1.05 SURVEY REFERENCE POINTS

- A. The Contractor's surveyor shall locate and protect survey control and reference points located throughout the project site.
- B. Control datum for survey is that indicated on the Drawings or will be provided by the Engineer.

- C. The Contractor shall protect survey control points prior to starting any site work. Preserve permanent reference points during construction.
- D. Promptly report to the Engineer the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
 - 1. The surveyor shall replace dislocated survey control points based on original survey control when directed by the Engineer.
 - 2. Make no changes without prior written notice to Engineer.
- E. The surveyor shall set control lath for rough and final grading purposes. Lath shall be placed at sufficient intervals to control grade or as directed by the Engineer.
- F. All new structures, pits, chambers, drainage pools, curbs, roads, swales, and other physical elements shall be located by survey control.
- G. Underground pipelines need not be located using survey control but shall be located using standard survey equipment operated by persons experienced in their operation.

1.06 SURVEY REQUIREMENTS

- A. The Contractor shall, with his/her own forces, obtain working or construction lines or grades as needed subject to the check of the surveyor. The surveyor shall set offsets.
- B. Establish elevations, lines, offsets and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements, stakes for grading, curbs, fill and topsoil placement, utility locations, slopes and invert elevations.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations, ground floor elevations, and equipment foundations.
- C. Provide tie distances on record drawings to all underground structures, valves, pipes, and utilities installed as work of this Contract.

1.07 COLLECTION CONVEYANCE SYSTEM AS-BUILT DOCUMENTATION

- A. Maintain a complete and accurate log of control and survey work as it progresses.
- B. As-built surveys and drawings to be prepared by the Surveyor upon the completion of construction on the project. As Built surveys shall be provided by the Surveyor upon request by the Engineer. The following data shall be secured by the Surveyor from physical surveys of the completed construction:
 - 1. The location of all manholes (center of manhole ring and cover with x, y, z coordinates)
 - 2. The location of sewer service laterals at the property line with x, y, z coordinates.
 - 3. The location of sewer service laterals at the mainline (wye) with x, y, z coordinates.
 - 4. Indicate size and location of all water mains and water laterals. Indicated size and location of all storm water piping, storm water structures, utilities (including but not limited to gas, electric, telephone, fiber optic,) that are within 20-feet of sewer or cross a sewer pipe. Provide crossing invert elevation of each when crossing any sewer piping (including laterals connections).
 - 5. Any changes to existing utilities, roadway pavements, ditches, etc. that varied from project plans.
- C. The Contractor shall provide the Owner a final survey prepared by a licensed surveyor: in AutoCad format (AutoCad 14 or higher) on CD, projected in NAD 83 State Plane New York Long

Island FIPS 3104 Feet, North American Vertical Datum 1988, and in PDF format, scaled to print on 24" x 36" plan sheets with scales matching those used on the Contract Plans.

- D. The USB Flash Drive should also contain sewer infrastructure (such as pipes, manholes, pump stations, etc.) provided in a current standard GIS database format. The GIS data schema will be made available to the contractor in ESRI File Geodatabase format. All GIS information in the deliverable should be in correct datums. Horizontal information in NAD 83 State Plane New York Long Island FIPS 3104 Feet. Vertical information should be in North American Vertical Datum of 1988 (NAVD 88). Horizontal and vertical accuracy should be within acceptable tolerance for real-time kinematic (RTK) GPS: 0.15'. "Rubber-sheeting" (moving, scaling, rotating) into approximate State Plane coordinates by using an aerial photography or any other means besides survey-grade control points is not permitted.
1. GIS deliverables should be formatted in a current standard GIS database format, such as an ESRI File Geodatabase. Older formats such as Shapefiles are less desirable due to their multiple outdated limitations and lack of modern functionality.
 2. Sewer GIS database deliverables should conform the defined Sewer Database Schema which will be made available. All data should be topologically correct (continuous and snapped) as appropriate (such as where manholes meet sewer mains). Key information should be filled out including, but not limited to:
 - a. GID (a randomly generated 36-character unique ID)
 - b. Hansen Unit ID (if available)
 - c. Life Cycle Status (indicating if these features exist or are proposed)
 - d. Manhole Rim Elevations (in NAVD 88)
 - e. Pipe Invert Elevations (in NAVD 88)
 - f. Pipe Size
 - g. Pipe Material

- E. Submit record documents under the provisions of Section 017839.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 013223

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Construction photography.

1.02 PHOTOGRAPHY

- A. Provide color photographs of the project produced by a photographer acceptable to the Engineer who is regularly engaged. Photographs taken by the Contractor will be accepted.
- B. Pre-construction
 - 1. Photographs: Provide photographs, taken within the limits of the work, to document existing conditions. Engineer will designate the date and location of the exposures that will generally be taken just prior to the construction operations. The minimum number of photographs required shall be twenty-five (25). Two (2) duplicate CD sets of all photos in JPEG format shall be provided.
 - 2. Video: Provide video taken along the entire route of pipe installation to document existing conditions. Two (2) duplicate CD sets of all photos in JPEG format shall be provided.
- C. Progress Photographs:
 - 1. Installed work will not be eligible for payment until photo-documentation is provided to the Resident Engineer.
 - 2. Collection Conveyance System Underground Piping Photo Documentation
 - a. Document the location of all underground pipelines by taking digital photographs of the installed pipelines prior to backfilling. At least 3 digital photographs shall be taken of each lateral before it has been backfilled.
 - 1) Utilizing a 12" x 18" dry erase board, write the address, station and elevation of each sewer building connection at the property line. The dry erase board shall be positioned adjacent to the building connection piping, within the frame of the photograph, so that both the lateral sewer connection pipe and descriptive information written on the dry erase board is legible in the construction photograph.
 - b. Each pipe installation crew shall be provided with a digital camera capable of a 5 mega-pixel quality picture using Smart Media, Compact Flash Media, or Memory Stick cards as the media within the camera by the Contractor.
 - c. At the end of each day that a pipe has been installed, the crew foreman shall hand deliver to the Resident Engineer the removable media with all construction photos taken that day.
 - 1) The Engineer will then download the photographs onto the Owner's computer and delete the photographs from the media.
 - 2) The media will be returned to the crew foreman within two working days from the date it was delivered.
 - 3) Have at least three (3) 8 GB media cards for each camera available, to enable memory card use on a rotating basis.
 - 4) Installed work will not be eligible for payment until photo-documentation is provided to the Resident Engineer.
- D. Final Photographs: Provide post-construction photographs, taken within the limits of the work, to document the final project and the conditions at final payment and issuance of the Final Certificate. The Final Payment will not be processed until such time as the photographs are provided. Engineer will designate the date and location of the exposures that will be taken. The minimum number of photographs required shall be twenty-five (25). Two (2) duplicate CD sets of all photos in JPEG format shall be provided.
- E. Annotate the following for each photo file:

1. Project name and number.
2. Contractor's identification, address, and telephone number.
3. Date and time picture was taken.
4. Location of picture relative to a specific location on the site, (for example, "100 Commerce Boulevard, looking eastward").
5. Picture ID: identified by pump station number, date picture was taken, and sequential number in which the pictures were taken.
6. Direction in which camera was aimed.
7. Key map of each pump station site referencing the locations and perspectives from which all post-construction photographs were taken. Each photo marker on the key map shall be referenced to the specific Picture ID.

1.03 PRINTS

- A. Paper Surface (Color): Smooth, glossy.
- B. Contrast (Color): High.
- C. Size for hand photographs: 4-inch x 6-inch.
- D. Commercially purchased album pages suitable for a 3 ring binder shall protect the prints. Deliver to the Engineer prints placed in the protector page. One (1) print per slot. Do not cover the annotations on the backside of the photograph.
- E. Panoramic photographs shall be taken at appropriate locations.
- F. Bind each set of photographs in a large capacity binder with plastic cover front and back as manufactured by National or equal. Each binder shall be sequentially numbered and show the name of the project on the binder and front cover using white on black ½ inch laminated lettering tape by Brother or equal. Provide an index with each set of photographs in a form acceptable to the Owner.

1.04 PHOTO FILES

- A. Minimum 5 mega pixel resolution, JPEG format.
- B. Landscape frame position.
- C. JPEG files shall be turned over to the Owner with all rights for use and reproduction of the photos files for the Owner's own use.
- D. Provide factual presentation. Provide correct exposure and focus, high resolution and sharpness, maximum depth of field, and minimum distortion.

1.05 SUBMITTALS

- A. Deliver prints within seven (7) working days after exposure with transmittal letter in accordance with the requirements of Section 013300.

PART 2 - PRODUCTS

2.01 NOT USED

PART 3 - EXECUTION

3.01 NOT USED

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section specifies the requirements for making submissions for the project. Electronic submissions will be required unless expressly noted otherwise.
- B. Refer to Section 013216 - Construction Schedule for the requirements concerning the submission of construction schedules and for making updates thereto.

1.02 IDENTIFICATION OF SUBMITTALS

- A. Each and every submission shall be provided by the Contractor and shall be accompanied by a SUBMISSION TRANSMITTAL FORM. The Contractor shall use the specimen form made a part of this Section. *Submittals not containing the form will be returned to the Contractor un-reviewed.* The Engineer will not review project submissions until such time as the form is completed in its entirety. Identify each submittal and resubmittal using the form.
- B. Each individual submittal shall be identified with a 'submittal number' based on the items six or, in some cases, (eight) digit specification Section number listed in the Project Manual Table of Contents. For example: 033000 or (033000.00)
 - 1. This Section number shall be followed by a dash. The dash will be followed by the Part 2 Article and paragraph location applicable to the item being submitted. For example: 033000-2.01.A.2
 - 2. This number will be followed by a second dash and a number in parentheses which will indicate the number of times the submission was made. Use the number "(1)" for the first time the item is being submitted. Using our example: 033000-2.01.A.2-(1)
 - 3. Subsequent submissions of the item shall utilize the original number and a sequential numeric suffix, i.e. "(2)" for a resubmission, "(3)" for the second resubmission, and so on. Substitute the new number for the original "(1)".
- C. Where a layout drawing, containing different elements of the project, is being submitted and there is a question as to what the log number might be, then the Contractor shall contact the Engineer so that an agreed upon log number can be assigned.
- D. It is incumbent on the Contractor to initially assign the submission log number designation to each submission. Submissions not containing a log number, as specified above, will be returned to the Contractor un-reviewed by the Engineer.
- E. Every submittal shall also be accompanied by a Transmittal Letter (or "Speed Form") addressed to the Engineer's Project Manager as hereinafter defined.

1.03 COORDINATION OF SUBMITTALS

- A. Prior to submitting to the Engineer, fully coordinate all interrelated work. As a minimum, do the following:
 - 1. Determine and verify all field dimensions and conditions by field measuring existing conditions and the installed work of this Contract and work by others.
 - 2. Coordinate with all trades, subcontractors, vendors, system and equipment suppliers and manufacturers, public agencies, and utility companies and secure all necessary approvals, in writing.
 - 3. Review all pertinent shop drawings provided to the Contractor by the Engineer for the purpose of coordinating the work in accordance with the requirements contained in Section 013100 - Project Management and Coordination.

- B. Make submittals in groups containing all associated items that in some way depend upon each other.
 - 1. This also applies to color charts, as one color may not be able to be selected without the selection of other colors so as to form a color-coordinated group.
 - 2. The Engineer may elect not to review partial or incomplete submissions, whereupon he/she will notify the Contractor of the additional submissions that are required before a review can be made.

1.04 TIMING OF SUBMITTALS

- A. Make submittals far enough in advance of scheduled dates of installation to provide time for reviews, for securing necessary approvals, for possible revisions and re-submittals, and for placing orders and securing delivery. The Engineer will review submittals in a manner as expedient as possible, and will generally send a written response to the Contractor within ten (10) calendar days of receipt of submittals.
- B. Submissions may be returned reviewed, unreviewed, rejected, returned conditioned upon submission of related items, or for other reasons set forth in the Contract Documents.
- C. Make submissions well in advance as the returning, rejecting or disapproval of submissions or other similar circumstances are possible and are deemed "avoidable delays". Costs for these delays or those attributed to Contractor's tardiness in making submittals shall be borne by the Contractor.
- D. All submittals requiring Engineer's review (except operations manuals) as required under the technical specifications of these documents shall be submitted within **NINETY (90)** consecutive calendar days after the date of the Notice to Proceed. An amount of **\$250** per calendar day shall be deducted from payment due the Contractor for each day that an outstanding submittal exists, said amount being the cost associated with the review by the Engineer.
- E. Operation and maintenance manuals shall be submitted at least **NINETY (90)** consecutive calendar days prior to scheduled startup of the unit or system.
- F. If material or equipment is installed before it has been deemed to be in general compliance with the Contract Documents, as determined by the Engineer, the Contractor shall be liable for its removal and replacement at no extra charge and without an increase in contract time.

1.05 DESTINATION OF SUBMITTALS

- A. Each submission of documents shall be accompanied by a transmittal form containing the name of the project, the contract name, the Engineer's project manager, a submittal ID number, and a description of content for the submitted items.
- B. Electronic submittals shall be transmitted through the Newforma® Project Center website or by email, pending instruction by the Engineer. H2M architects + engineers is using a project information application called Newforma® Project Center. One of its components is Newforma Info Exchange, a web application that facilitates sending and sharing transmittals, and file sharing.
- C. As an external team member on this project the Contractor will be required to access the H2M architects + engineers/Newforma Info Exchange website for information related to the project, including file transfers, RFI, Submittals, Action Items, and project Calendar information. The Contractor will have access to this website using any internet-capable computer running Internet Explorer or Firefox. All data transmitted through the H2M architects + engineers/Newforma Info

Exchange website is encrypted and logged. Further instructions will be provided to the Contractor after the contract is awarded.

- D. Other submissions, such as material samples or other items as instructed by the Engineer, shall be sent to the Engineer's office as follows:

H2M architects + engineers

538 Broad Hollow Road - 4th Floor East

Melville, New York 11747

Attention: H2M Project Manager (Named at Pre-Construction Conference or in the Notice to Proceed)

1.06 CLARITY OF SUBMITTALS

- A. All printed materials shall be neat, clean, professionally drafted by hand or by computer, clear, legible, and of such quality that they can be easily reproduced by normal photocopying or blueprinting machines.
- B. All electronic submittals shall be produced with a minimum resolution of 300 dpi and with character recognition.
- C. Binders of information shall be separated into groups, subsystems, or similar equipment/function. Copies not conforming to this paragraph will be returned to the Contractor without the Engineer's review.

1.07 CONTRACTOR'S REPRESENTATION

- A. By making a submission, the Contractor represents that he/she has determined and verified all field measurements and dimensions, field construction criteria, site and building constraints in terms of limitations in moving equipment into an enclosed space, materials, catalog and model numbers and similar data and that he/she has checked and coordinated each submission with other work at or adjacent to the project site in accordance with the requirements contained in Section 013100 - PROJECT MANAGEMENT AND COORDINATION and the Contract Documents.
- B. Every SUBMISSION TRANSMITTAL FORM shall contain the Contractor's approval stamp and date showing that the submittal has been approved by the Contractor. The Engineer will not review submittals that have not yet been reviewed and approved by the Contractor.

1.08 ENGINEER/ARCHITECT'S REVIEW

- A. Engineer will review and comment on each submission conforming to the requirements of this Section.
 - 1. Engineer's review will be for conformance with the design concept of the project and will be confined to general arrangement and compliance with the Contract Documents only, and will not be for the purpose of checking dimensions, weights, clearances, fittings, laying lengths, tolerances, interference's, for coordinating the work by others or subcontractors.
 - 2. The Engineer's review of a separate item, or portion of a system, does not represent a review of an assembly or system in which the item functions.
- B. The Engineer will mark submittals as follows:
 - 1. NO EXCEPTION TAKEN - No corrections, no marks. The content of this submittal has been reviewed by the Engineer and been found to be in general compliance with the Contract Documents. No further submission of this submittal is required and the information contained in the submittal may be built into the work in accordance with the Contract Documents.

2. MAKE CORRECTIONS NOTED- Minor amount of corrections. The content of this submittal has been reviewed by the Engineer and has been found in general to be in compliance with the Contract Documents. The notations made on the submittal by the Engineer shall be incorporated into the work in accordance with the terms and conditions of the Contract Documents. No further submission of this submittal is required.
 3. REVISE AND RESUBMIT - The content of this submittal has been reviewed by the Engineer and this review has determined that additional data and/or modification to the submitted data or other changes are required to bring the work represented in this submittal into compliance with the Contract Documents. This submittal shall be reviewed and revised in accordance with the Engineer's comments and resubmitted to the Engineer for review. The information contained on the resubmittal shall not be incorporated into the work until the submittal is returned to the Contractor marked "NO EXCEPTION TAKEN" or "MAKE CORRECTIONS NOTED".
 4. REJECTED - SEE REMARKS - The content of this submittal has been reviewed by the Engineer and has been determined not to be in accordance with the requirements contained in the Contract Document and requires too many corrections or other justifiable reason. The submittal shall be corrected and resubmitted or a submittal of an alternate shall be provided. No items are to be fabricated under this mark.
 5. SUBMIT SPECIFIED ITEM - The content of this submittal has been reviewed by the Engineer and this review has indicated that the work displayed in the submittal is not in compliance with the Contract Documents. The Contractor shall submit another submittal for this portion of the work, which complies with the Contract Documents.
 6. NO ACTION TAKEN - Review for this item is the responsibility of another party, therefore, no action will be taken by the Engineer accordingly. Submission will be returned without review to the Contractor.
 7. NO ACTION TAKEN - This submittal is not required by the Contract Documents, therefore, no action will be taken by the Engineer. Submission will be returned without review to the Contractor.
 8. RECEIVED FOR RECORD - This submittal is accepted on the project and filed for record purposes only, in accordance with the terms and conditions of the Contract Documents. Documents marked "RECEIVED" will not be returned.
- C. No payment will be made on any item for which a submission is required if such submission:
1. has not been made,
 2. has been made but was not stamped "No Exceptions Taken" by Engineer,
 3. has been made and stamped "Make Corrections Noted", but contractor has not complied with Engineer's notes marked on the submittal,
 4. has been made and stamped "No Exceptions Taken", but item provided does not conform to the shop drawing nor to the Contract Documents.
- D. Submittals not required by these specifications will not be recognized or processed.
- E. Suffolk County Department of Public Works standard review stamp will be used containing similar notations.

1.09 RESUBMISSIONS

- A. Prepare new and additional submissions, make required corrections, and resubmit corrected copies until found in compliance with the Contract Documents.
- B. On, or with, re-submittals, clearly describe revisions and changes made, other than the corrections requested by Engineer, which did not appear on the previous submissions.

1.10 CONTRACTOR'S RESPONSIBILITIES

- A. Engineer's review of submittals shall not relieve the Contractor of his/her responsibility for any deviation from the requirements of the Contract Documents nor relieve the Contractor from responsibility for errors or omissions in the submittals.
- B. No portion of the work requiring a submission shall be commenced until the Engineer and SCDPW has found the submission in general compliance with the Contract Documents.
- C. The Contractor shall provide written notification of any specification or drawing deviation.

1.11 EXCESS COSTS FOR ENGINEERING/ARCHITECTURAL SERVICES

- A. The Owner will charge to the Contractor, and will deduct from the partial and final payments due the Contractor, all excess engineering and architectural expenses incurred by the Owner for extra services (work) conducted or undertaken by the Engineer as stipulated below:
 - 1. Services and other similar charges because of the Contractor's errors, omissions, or failures to conform to the requirements of the Contract Documents as related to administrative charges associated with non-compliance with the requirements for making project submissions.
 - 2. Services and other similar charges required to examine and evaluate any changes or alternates proposed by the Contractor and which may vary from the Contract Documents.
 - 3. Services and other similar charges as a result of the Contractor's proposed substitution of materials, equipment or products which require a redesign of any portion of the project, as contained in the Contract Documents at the time of bid.
 - 4. Services and other similar charges as a result of the Contractor's proposed substitution of products which require an engineering and/or architectural evaluation, beyond the time stipulated in Section 012500, to determine if the substituted product is equal to that specified.
 - 5. Services and other similar charges as a result of changes by the Contractor to dimensions, weights, sizes, voltages, phase, horsepower, materials of construction, and similar physical or operating characteristics of the product furnished which require redesign of the project in any way.
 - 6. Services and other similar charges for the review of resubmissions of shop drawings that have been marked as "No Exceptions Taken" or "Make Corrections Noted".
 - 7. Services and other similar charges for the review of shop drawings submitted more than two (2) times for the same product or portion of the work.

1.12 MISCELLANEOUS SUBMITTALS

- A. Provide a Submittal Schedule within fifteen (15) calendar days from the date of the Notice to Proceed. The Submittal Schedule shall list all submittals for the project referenced by draft log number. Provide the estimated date that the submittal will be transmitted to the Engineer for review.
- B. Within fifteen (15) calendar days from the date of the Pre-Construction Meeting, submit a Proposed Products List. This list shall be a complete listing of all products proposed for use, with name of manufacturer, service headquarters, trade name and model number of each product. Partial listings will not be accepted.
- C. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.13 SUBCONTRACTOR LIST

- A. The Contractor shall submit, on AIA Form G805, within THIRTY (30) calendar days after the date of the Notice to Proceed, a list of all subcontractors, including the names of the major subcontractors that were submitted at the time of the bid.
- B. Indicate M/WBE subcontractors in accordance with the requirements contained in other portions of the Project Manual.

1.14 SAFETY DATA SHEETS (SDS)

- A. Comply with "Right to Know" requirements of Chapter 551 of Laws of New York, 1980, concerning notification of the use of toxic substances.
- B. Any product or substance used by the Contractor or its subcontractors which is listed in Subpart Z of OSHA Part 1910 Title 29 of the Code of Federal Regulations entitled "Toxic and Hazardous Substances" shall be identified to the Owner/Engineer by the Contractor's submission of a standard Safety Data Sheet (SDS) in accordance with "Right To Know" requirements.
- C. Products will not be permitted to be kept on site without a SDS.

1.15 SHOP DRAWINGS

- A. Submit shop drawings for all fabricated work, for all manufactured items and for items specifically required by the specifications.
- B. Submit each shop and layout drawing to Engineer in the form of one (1) quality reproducible transparency and two (2) prints.
 - 1. After the submittal has been reviewed by the Engineer, the transparency will be annotated, prints will be made for Engineer's and Owner's use, records, and distribution.
 - 2. Engineer will return the transparency to the Contractor.
 - 3. Send one print to the Owner as specified above.
- C. Submit one (1) electronic (.pdf) copy of each standard drawing, catalog cut, or other material. All shop drawings or submittals that are not in the standard 8-1/2" x 11" format shall be submitted electronically. Samples shall be delivered directly to the office of the Engineer. The Engineer will return an electronic copy of each submittal once reviewed.
- D. Subcontractors shall submit shop drawings directly to the Contractor for checking. Thoroughly check subcontractors' shop drawings for measurements, sizes of members, details, materials, and conformance with the Contract Documents.
 - 1. Return submittals which are found to be inaccurate or in error.
 - 2. Do not submit to the Engineer until all corrections have been made.
- E. Clearly show the relationship of the various parts of the project and where the information provided on the submission depends upon field measurements and existing conditions.
- F. The Contractor shall make all measurements, confirm existing conditions, and include them on the shop drawings before making a submission to the Engineer.
- G. Submissions for a single item, or group of related items shall be complete.
- H. When submitting manufacturers' catalogs, pamphlets or other data sheets, in lieu of prepared shop drawings, clearly mark the items being submitted for review.

- I. If the shop drawings contain any departures from the contract requirements, specifically describe them in the letter of transmittal.
 1. Where such departures require revisions to layouts, structural, architectural, electrical, HVAC or any other changes to the work as shown, Contractor shall, at his/her own expense, prepare and submit revised drawings accordingly.
 2. Make drawings the same size as the Contract Drawings and to the same scale.

1.16 SAMPLES

- A. Where required, or where requested by the Engineer, submit sample or test specimens of materials to be used or offered for use.
 1. Samples shall be representative, in all respects, of the material offered or intended, shall be supplied in such quantities and sizes as may be required for proper examination and tests, and shall be delivered to Engineer, prepaid, along with identification as to their sources and types of grades.
 2. Submit samples well in advance of anticipated use to permit the making of tests or examinations.
- B. Samples will be checked for conformance with the design and for compliance with the Contract Documents.
- C. Work shall be in accordance with the approved sample. The use of materials or equipment for which samples are requested or required to be submitted is not permitted until such time that the Engineer has completed his/her review.

1.17 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Engineer.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation. Provide manufacturer's instructions with shop drawings.

1.18 CERTIFICATIONS

- A. Submit certifications of compliance indicated in the Contract Documents.
- B. Certifications shall be complete and exact, they shall be properly authenticated by the written signature, in ink, of an owner, officer or duly authorized representative of the person, firm or organization issuing such certification and they shall guarantee that the materials or equipment are in complete conformance with the requirements of these specifications.

1.19 WAIVER OF CERTAIN SUBMITTAL REQUIREMENTS

- A. Unless otherwise specified, the requirement to submit data and samples for products specified for approval will be waived for products specified by brand name if the specifically named products are furnished for the work. In such cases, the Contractor shall submit two (2) copies of required Product Data directly to the Engineer's field representative for information and verification during its incorporation into the work. The SUBMISSION TRANSMITTAL FORM shall always be used.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

THIS SPACE LEFT INTENTIONALLY BLANK



SUBMITTAL COVER SHEET
<Project Number> - <Project Name>
 (This completed sheet must accompany each submittal for a valid submission)

SUBMITTAL INFORMATION:

Submission Date:		00 00 00 - 0.00 . A (1)	Received by H2M:	
	Date	Submittal Number		Date
Substitution:	☐	CHECK HERE IF SUBMISSION IS FOR A SUBSTITUTION. Provide additional information as per Sections 016100 and 012500.		
Submission No:	1			
	No.			
Text Reference:	0.00 A			
	Article Paragraph	Submittal Title		
Specification Section:	00 00 00			
	Spec. Section #	Spec. Section Name		
Reference Drawings:				
	As Applicable			

CONTRACTOR INFORMATION:

Contract For:		Contact:	
Company Name:		Email:	
Contractor Address:			
	Street		
	City	State	Zip
Phone:		Fax:	
Reviewed By:		Review Date:	
	Name		Date

SUPPLIER INFORMATION:

Company Name:	
Contact:	
Phone:	
Fax:	
Email:	

CONTRACTOR'S CERTIFICATION STATEMENT:

We hereby represent that we have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers, and similar data and we have reviewed and approved this submittal and checked and coordinated each item with the other applicable approved Shop Drawings and all Contract requirements.

Signed

CONTRACTOR'S COMMENTS

END OF SECTION 013300

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Codes
- B. Governing agencies
- C. Permits

1.02 CODES

- A. Comply with the requirements of the various codes referred to in these Specifications. Such codes shall be the date of the latest revision in effect at the time of receiving bids.
- B. If there is a conflict between local, state, and/or Federal regulatory requirements, seek a consultation with the State Department of Labor. Resolve conflicts to the satisfaction of the State Department of Labor prior to commencing work.

1.03 GOVERNING AGENCIES

- A. All work shall conform to and be performed in strict accordance with all governing agencies such as, but not limited to:
 - 1. Occupational Safety and Health Act - OSHA
 - 2. State Department of Environmental Conservation
 - 3. State Building Code
 - 4. State Fire Code
 - 5. National Fire Protection Association - NFPA
 - 6. National Electrical Code
 - 7. State Plumbing Code
 - 8. New York State Energy Conservation Construction Code
 - 9. State Education Department
 - 10. Suffolk County Department of Health (SCDHS)
 - 11. Riverhead Sewer District
 - 12. Town of Riverhead Codes, Rules, Laws and Ordinances
 - 13. Sewer District Sewer Use Code
 - 14. Riverhead Water District
 - 15. Long Island Power Authority (LIPA)
 - 16. National Grid
 - 17. PSEG
 - 18. NYSDEC

1.04 PERMITS AND INSPECTIONS

- A. Representatives of the Owner shall have access to the work for inspection purposes. The Contractor shall provide facilities suitable to the Owner to facilitate inspections of the installed work.
- B. Obtain and pay for all permits, fees, licenses, certificates, inspections and other use charges required in connection with the work.
- C. Such permits include, but are not limited to:
 - 1. Transportation and disposal of construction debris

1.05 NOISE CONTROL

- A. Control noise in accordance with Town and OSHA requirements.
- B. Operations which may generate objectionable noise shall be limited to between the hours of 8:00 a.m. to 4:30 p.m. on weekdays.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 014100

PART 1 - GENERAL

1.01 ABBREVIATED SUMMARY

- A. This Section explains the format of the specifications.

1.02 SPECIFICATION FORMAT

- A. The Specifications are generally arranged according to the Construction Specifications Institute (CSI) format. Most of the technical requirements are specified in the technical specifications of the document, which are grouped into forty-eight (48) major divisions. Most of the legal and administrative requirements are included in Division 01, General Conditions, Information For Bidders, and the Contract (agreement).
- B. Technical sections are arranged in numerical order, however section numbers may not be consecutive from section to section.
- C. Page numbering is subordinate to each section.
- D. Most sections are generally broken down into three (3) parts:
 - 1. PART 1 - GENERAL
 - 2. PART 2 - PRODUCTS
 - 3. PART 3 - EXECUTION
- E. Not all these parts may be used and in some cases, the title of some of the parts may be different than listed above. Paragraph numbers are subordinate to each part.
- F. The Contractor is advised that the format described here is flexible in nature.
 - 1. There is some overlapping of specified information between various portions of the Specifications.
 - 2. In all cases, the entire requirements of the Contract Documents for the project shall apply.
- G. Explanations:
 - 1. Many technical sections begin with a paragraph titled "SECTION INCLUDES", "DESCRIPTION", or similar wording.
 - a. In these paragraphs, a brief listing of the specified products may appear or a brief description of the work generally specified in that section is presented.
 - b. These descriptions or listings are not all inclusive, but merely are provided as an aid in locating subject matter.
 - c. In some cases special cost related items of work are called to the attention of the Contractor in these opening paragraphs.
 - 2. "RELATED SECTIONS" or "RELATED WORK" or similar wording paragraphs list or reference related work specified elsewhere in the Contract Documents. Such listing is not all inclusive, rather, they are merely an aid to the Contractor in locating some of the other Specification Sections wherein work is specified which has a particularly close interrelationship with the work specified in that section.

- a. It shall be understood that all of the Work, and all of the Specifications and other portions of the Contract Documents, are interrelated, and that the total of all requirements set forth in all of the Contract Documents shall be met.
 - b. Equipment suppliers and manufacturers shall be advised of the requirements for making submittals and delivering products, as specified in Division 1 sections, even if said sections are not referenced therein that section.
3. "REGULATORY REQUIREMENTS" or "REFERENCES" or similar wording paragraphs describe standards, laws, guidelines, regulations, and standards related to workmanship and installation of the products specified which shall be followed by the Contractor in completing the work specified therein that section as if it was written there in that section. All such requirements and references shall be latest issue in effect at the time of the bid opening.
4. When a "GUARANTEE" or "WARRANTY" paragraph appears in the section it is calling attention to a guarantee which extends beyond the period of the Contractor's Guarantee called for in the administrative portion of the Contract Documents or it states special requirements specific to the equipment, systems or products specified in that section.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 014223

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Requirements for monitoring the quality of the constructed project.
- B. Work of this Section also includes services of an independent testing laboratory for quality assurance testing.
- C. The services of the testing laboratory will be paid for out of the cash allowance included by the Contractor in the price as bid in accordance with the requirements contained herein and in Section 012100 - Allowances.

1.02 REFERENCES

- A. ASTM C1077 - Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.
- B. ASTM D3740 - Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- C. ASTM D4561 - Practice for Quality Control Systems for an Inspection and Testing Agency for Bituminous Paving Materials.
- D. ASTM E699 - Practice for Criteria for Evaluation of Agencies Involved in Testing, Quality Assurance, and Evaluating Building Components in Accordance with Test Methods Promulgated by ASTM Committee E6.

1.03 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes, or specified requirements indicate higher standards or workmanship that is more precise.
- C. Perform work by persons qualified to produce workmanship of specified quality.
- D. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.
- E. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

1.04 QUALITY ASSURANCE - TESTING LABORATORY

- A. In order to establish compliance with the Contract Documents, materials shall be tested, examined and evaluated before they are incorporated into the work. During and after installations, additional tests, examinations, and evaluations shall be made to determine continued compliance throughout the course of the work.
- B. Testing laboratory shall be a reputable, experienced firm that is capable of performing all of the required testing and authorized to operate in the state in which the project is located.
- C. Perform all sampling and testing in accordance with specified procedures and use the materials, instruments, apparatus, and equipment required by the codes, regulations and

standards. Where specific testing requirements or procedures are not described, perform the testing in accordance with all pertinent codes and regulations and with recognized standards for testing.

- D. In the event that samples and test specimens are not properly taken, handled, stored or delivered or if other requirements of this Section are not complied with, Engineer reserves the right to delegate any or all of this work to others, or to take whatever action deemed necessary to ensure that sampling and testing are properly accomplished, for which all costs shall be borne by Contractor.
- E. Engineer reserves the right to disapprove the use of a specific testing laboratory, even after prior approval, if the laboratory fails to meet or comply with the requirements of this Section. If this should occur, immediately discharge the testing laboratory and retain the services of a different laboratory acceptable to Engineer.
- F. The testing laboratory shall meet the following criteria:
 - 1. Be capable of performing all of the required tests.
 - 2. Be regularly engaged in performing the types of services required.
 - 3. Have adequate facilities, materials, equipment, and personnel to perform the services.
 - 4. Have an adequately trained, experienced and qualified staff.
 - 5. Have at least one registered professional engineer licensed in the state in which the project is located who shall be capable of performing field tests, supervising laboratory testing and interpreting test results. The professional engineer shall be thoroughly knowledgeable in materials, soils, asphalt paving and concrete.
 - 6. Shall be able to be on the Project site within two hours after being notified.
 - 7. Comply with the requirements of ASTM C1077, ASTM D3740, ASTM D4561, ASTM E548 and ASTM E699.
 - 8. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.
- G. Comply with the requirements of ASTM C1077, ASTM D3740, ASTM D4561 and ASTM E699.
- H. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy standard traceable to either National Bureau of Standards or accepted values of natural physical constants

1.05 REFERENCE STANDARDS

- A. Conform to reference standards by date that the project was last bid.
- B. Obtain copies of standards when required by Contract Documents.
- C. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.06 SUBMITTALS

- A. Within fifteen (15) calendar days from the date of the Notice to Proceed, submit documentation from three (3) testing laboratories that clearly indicates experience, location, qualifications of staff, and descriptions of any limitations or restrictions of the firm.
 - 1. Include a price schedule for standard tests and a billing rate schedule for technician classifications.

2. Based upon this information, the Engineer will select one firm to be the primary testing laboratory and one firm to act as a standby.
- B. Certified copies of each test report shall be mailed directly to the Engineer. The Contractor shall arrange with the laboratory to secure copies.
- C. Each report shall be in writing and shall include the testing method used, the test results, the specified results, the exact location of where the test specimens were taken, the date taken, Project identification, Contractor's name and other pertinent information required for a complete and meaningful test report.
- D. Each report shall be signed and certified by a responsible officer of the testing laboratory.
- E. Mail reports directly to Engineer within 24 hours after the sample is taken, except in those instances when tests cannot be immediately performed because of required curing, incubation periods, or lengthy testing procedures.
- F. The laboratory shall verbally communicate test results when requested by the Engineer. This does not eliminate nor replace the requirements for a written report.

1.07 SCHEDULING - LABORATORY SERVICES

- A. Except where otherwise specified, the Engineer will determine the number of samples to be taken, the date and time samples will be taken and tests made, the number and type of tests to be performed, who will collect the samples, how they will be handled and stored and when laboratory personnel are required on site.
- B. Engineer will notify Contractor of his/her decision to take samples and/or have tests made and provide him with the pertinent information. Contractor is responsible for notifying the testing laboratory and for having the testing performed, on schedule.
- C. In addition to the above, Contractor shall make his/her own arrangements for the sampling and testing of materials he/she proposes to incorporate into the work. This shall not be paid for out of the cash allowance.
- D. Notify Engineer at least 72 hours in advance of the times at which scheduled samples or tests will be conducted.
- E. If samples and/or tests cannot be taken or performed when required, delay the work until such time that they can be accomplished. Where possible, any work that has been installed but has not been sampled or tested as required, shall be tested by other means. Upon Engineer's request, uncover any work, which has been buried or covered, and perform special tests designated by Engineer. If the work cannot be tested by other means, Engineer may declare the work unacceptable. All costs associated with noncompliance and for special testing shall be borne by the Contractor and not be paid for out of the cash allowance.
- F. Should the testing laboratory be scheduled to take or collect samples or to perform tests, and finds that it is unable to do so as a result of delays in construction, inclement weather, or any other reason, reschedule the tasks for a date acceptable to Engineer. Costs associated with times testing laboratory is unable to perform scheduled services shall be borne by the Contractor and will not be paid for under the allowance.
- G. Plan all work and operations to allow for the taking and collection of samples and allow adequate time for the performance of tests. Delay the progress of questionable work until the receipt of the certified test reports.

1.08 TESTING REQUIREMENTS

A. Compaction Testing - Soil:

1. Testing agency will test compaction of soils in place according to ASTM D 1556, Density and Unit Weight of Soil In Place by the Sand Cone Method or ASTM D 2922, Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
2. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.
3. Perform tests and analysis of fill material in accordance with ANSI/ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5-lb. Rammer and 12-inch Drop.

B. Concrete Testing:

1. Collect samples in accordance with ASTM C172, Practice for Sampling Freshly Mixed Concrete.
2. Make test cylinders in accordance with ASTM C31, Standard Practice for Making and Curing Concrete Test Specimens in the Field.
3. Test concrete cylinders in accordance with ASTM C39, Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
4. Test slump and air entrainment.

1.09 TESTING SCHEDULE

A. Compaction Testing of Soil:

1. Tests will be performed at the following locations and frequencies:
 - a. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 1500 square feet or less of paved area or building slab, but in no case fewer than three tests, or as directed by the Engineer.
 - b. Foundation Wall Backfill: At each compacted backfill layer, at least one test for every 100 feet or less of wall length, but no fewer than two tests, or as directed by the Engineer.
 - c. Trench Backfill: At each compacted backfill layer, at least one test for every 150 feet or less of trench length, but no fewer than two tests, or as directed by the Engineer.
 - d. Concrete flatwork: As directed by the Engineer.

B. Concrete Testing: Make six (6) concrete test cylinders for each 50 c.y. or fraction thereof.

1. Test two (2) cylinders at 7 days.
2. Test two (2) cylinders at 28 days.
3. The remaining cylinders shall be tested at a time to be determined by the Engineer. This requirement shall be subject to change as required by the Engineer.

1.10 FIELD OBSERVATION OF CONTRACTOR'S WORK

- A. The Engineer will provide periodic observation of the Contractor's work.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions. Verify that the existing substrate is capable of structural support or attachment of new Work being applied or attached. Examine and verify specific conditions described in individual specification sections. Verify that utility services are available, of the correct characteristics, and in the correct locations.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance. Seal cracks or openings of substrate prior to applying next material or substance.
- B. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 FIELD QUALITY CONTROL

- A. Allow representatives of the testing laboratory access to the work at all time. Provide all equipment, labor, materials, and facilities required by the laboratory to properly perform its functions. Cooperate with and assist laboratory personnel during the performance of their work.
- B. Test specimens and samples shall be taken by the person(s) designated in other Sections, or as directed by Engineer. Conduct field sampling and testing in the presence of Engineer. Provide all materials, equipment, facilities and labor for securing samples and test specimens and for performing all field-testing.

3.04 FIELD INSPECTOR SCOPE OF SERVICES

A. CONCRETE

1. CONCRETE FIELD INSPECTOR

- a. QUALIFICATIONS: The inspector must be a certified ACI Concrete Field Testing Technician, Grade I and have at least one year of experience as a concrete field inspector.
- b. The duties will include the following:
 - 1) Perform inspection in accordance with NYSDOT Material Method MM 9.2, or as ordered by the Engineer.
 - 2) Verify the ambient air temperature is within specifications for concrete placement.
 - 3) Check plant inspection ticket for each concrete truck delivery for proper mixture and information.
 - 4) Verify that the NYSDOT sticker is current for each concrete delivery truck and that it is loaded within the truck mixing capacity.
 - 5) Check if the concrete has been mixed the proper number of revolutions.
- c. Perform the following tests on one randomly selected delivery truck each day and each 50 cy/day, or as ordered by the Engineer, at a minimum.
 - 1) Sample the concrete (ASTM C-172)
 - 2) Perform slump tests (ASTM C-143)
 - 3) Check air content of concrete (ASTM C-173 or C-231)

- 4) Check concrete temperature
- 5) Cast six each 6" x 12" or 4" x 8" concrete test cylinders (ASTM C-31)
- 6) Check unit weight of concrete for lightweight concrete (ASTM C-567)
- 7) Monitor total mixing water (not to exceed specified amount)
- 8) Assure that test cylinders are being field cured as required (with the structure or in a properly constructed curing box furnished by the Contractor)
- 9) Check that maximum time for discharging of concrete has not been exceeded.
- 10) Verify cold or hot weather curing procedures, if required (ACI305R & 306R)
- 11) Report all noted deficiencies immediately (verbally) to the designated authority
- 12) Provide a daily report to the County, within 48 hours, including all the above data including who was notified of any deficiencies.
- 13) Price bid shall include the technicians time and all equipment and tests necessary to perform the work as outlined above.

B. SOILS**1. SOIL TECHNICIAN**

- a. **QUALIFICATIONS:** Technicians must be North East Transportation Training & Certification Program (NETTCP), Soil & Aggregate Inspector certified, or equal, and have at least two years experience.
- b. The duties will include the following:
 - 1) Inspect fill / backfill materials to verify they meet specifications.
 - 2) Inspect fill / backfill compaction operations and thickness of lifts.
 - 3) Perform tests per ASTM D-6938 using a nuclear density gauge in Direct Transmission mode only.
 - 4) Perform field proctor tests, at least once per day, per type and source of fill / backfill material.
 - 5) Provide a daily report to the County, within 48 hours, including all the above data including who was notified of any deficiencies.
 - 6) Price bid shall include the technicians time and all equipment and tests necessary to perform the work as outlined above.

2. SOIL BEARING CAPACITY INSPECTION FOR FOUNDATIONS

- a. **QUALIFICATIONS:** Licensed Professional Engineer with at least two years of geotechnical/foundation experience.
- b. The duties will include the following:
 - 1) Inspect all materials at the final foundation elevation for conformance to the design assumptions.
 - 2) Perform all appropriate tests and record all test results including, quality and quantity of fill/ backfill material placed and number and thickness of lifts.
 - 3) Report all noted deficiencies immediately (verbally) to designated authority.
 - 4) Provide a daily report to the County, within 48 hours, including all the above data. including who was notified of any deficiencies.
 - 5) Price bid shall include the technicians time and all equipment and tests necessary to perform the work as outlined above.

END OF SECTION 014500

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section supplements the General Conditions.
- B. The Work of this Section includes temporary facilities, utilities, and controls to be furnished by the Contractor for this project as it is specified herein.
- C. This Section is made a part of all Construction Contracts associated with the project. It contains specific references to the particular Contractor supplying said product or service. If no reference is provided then the requirement applies to all Prime Construction Contractors.

1.02 CARE AND PLACEMENT

- A. All temporary and permanent facilities and controls and all other elements on the project site shall meet all standards of the Occupational Safety and Health Act of 1970 and subsequent revisions. The Contractor shall comply with all requirements of the Act.
- B. The Contractor shall take every precaution and shall provide such equipment and facilities as are necessary or required for the safety of its employees and persons at the site.
- C. In the event of damage to existing and/or temporary facilities then immediately make all repairs and replacements to an equal condition prior to the event.

1.03 QUALITY PERFORMANCE

- A. Comply with and perform all work in accordance with the requirements of local authorities and utility companies having jurisdiction, and all applicable codes, regulations and ordinances.
- B. Secure approvals from the appropriate jurisdictions and utility companies on all repairs, relocations, connections, disconnections and the Work.
- C. All barricades, warning signs, lights, temporary signals and other protective devices shall conform with "Manual of Uniform Traffic Control Devices", New York State Department of Transportation."

1.04 SUBMITTALS

- A. The Contractor shall provide a list of contact numbers as follows:
 - 1. Contractor's superintendent and office project manager (home, beeper, cellular, office, fax, trailer, and email address).
 - 2. All subcontractors.
 - 3. All utility companies.
 - 4. Emergency services such as fire department, police, and ambulance.
- B. Contractor shall also submit the following:
 - 1. Name and qualifications of person or persons who shall be available to render first aid.
 - 2. Names, addresses and telephone numbers of personnel who can be telephoned and act on behalf of Contractor in the event of emergencies or other problems requiring prompt attention during winter shutdown, holidays, nights and other periods when the Contractor's superintendent may be absent from the project site.

1.05 CONTRACTOR'S RESPONSIBILITY

- A. The Contractor shall be responsible for the installation, performance, maintenance, and repair of all temporary facilities and controls specified herein this Section as originally provided.
- B. The Owner reserves the right to immediately correct a Contractor caused action, if in the opinion of the Owner, the situation may result in the immediate loss of life, property, and degradation of the environment. The costs for actions taken by the Owner shall be deducted from money due or to become due the Contractor. Amounts in excess shall be paid by the Contractor.
- C. If the Contractor caused situation is not deemed immediate, then the Contractor shall, within 24 hours of receipt of written and/or verbal notice, correct the defect or unsatisfactory condition.
- D. The Owner may repair, correct, replace, or install temporary facilities to correct the situation if the Contractor fails to perform within the allowed time. The costs to make the corrections shall be deducted from money due or to become due the Contractor. Amounts in excess shall be paid by the Contractor.

PART 2 - PRODUCTS

2.01 GENERAL

- A. The Owner may use temporary power lines, pipes, roadways or other facilities that the Contractor furnishes, installs, and maintains (then removes at the completion of the work), during the period of construction.
- B. The location of all temporary power lines, roadways, and other necessary temporary facilities shall be subject to the approval of the Engineer, and these shall be located and operated so as not to interfere with the operation of the facilities.

2.02 WATER FOR CONSTRUCTION PURPOSES

- A. The Contractor shall obtain water from the nearest potable water source as designated by the Owner.
- B. Potable water used for dust control, pipe exfiltration testing, process tank testing, or pump and process equipment testing, will not be paid for by the Owner. The Contractor shall include the costs for water for this purpose in the price as bid
- C. The Contractor shall exercise measures to conserve water.
- D. Provide insulation and heat tracing to prevent freezing of temporary piping. Drain hoses at the end of each use.
- E. The Contractor, subcontractors, and personnel involved in the project shall be permitted to use water for construction purposes as provided under this paragraph.

2.03 SANITARY FACILITIES

- A. The Contractor shall provide and maintain his or her own temporary toilet facilities and enclosures.
- B. These facilities shall be maintained in a strictly sanitary manner and be screened from the general public.

- C. All facilities shall be in accordance with the Occupational Safety and Health Act (OSHA) standards and all other applicable local codes.
- D. The locations of such facilities shall be determined by the Engineer or the Owner and be shown on the General Contractor's Site Utilization Plan.
- E. All applicable codes and regulations regarding the maintenance and method of waste disposal for these facilities will be strictly enforced. These facilities shall be of the portable type.
- F. Comply with the requirements also contained in Section 015719 – Temporary Environmental Protection Controls.

2.04 BARRIERS AND PROTECTION

- A. The Contractor shall provide railings, barricades, signs, fences, overhead protection, walkway covers and other protective devices to prevent unauthorized entry to construction areas, to allow for the Owner's / Public safe use of the site and to protect existing facilities and adjacent structures from damage from the work.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing buildings.
- C. Provide protection for plant life designated to remain.
- D. Protect vehicular traffic, stored materials, public utilities, site and structures from damage.
- E. Provide warning signs, detour signs and other traffic control devices to insure the safety of plant operators and to adequately direct traffic around the work. Illuminate barricades, obstructions, and warning signs from sunset to sunrise.

2.05 TEMPORARY FENCING

- A. Each Contractor is responsible for performance compliance with OSHA standards.
- B. The Contractor shall provide temporary safety fence around all open excavations or other dangerous conditions on the construction site.
 - 1. All temporary safety fencing shall be designed and erected in compliance with OSHA standards, but in no case less stringent than these specifications for fencing.
 - 2. Fence is to be bright orange in color, a minimum of 4 feet high, and properly secured using 1" diameter steel pipe at 4'-0" on-center as support posts.
 - 3. Stake each support post to a depth of 18" and tamp securely into place.
 - 4. Each post shall be plumb.
 - 5. Secure fencing to posts using heavy-duty 12" long cable ties or tie wire.
 - 6. The fence and supports shall remain the property of the Contractor and be promptly removed at the appropriate time.
- C. The Contractor shall install temporary safety fencing around the outside perimeter of each structure excavation, trench excavation, open tank that has a wall height less than four (4) above grade or grating or at any other area that is open to danger if not protected by barriers during construction.
 - 1. Fencing shall be securely installed and maintained in accordance with OSHA regulations until the railing and grating has been installed.

2.06 TEMPORARY SECURITY FENCING

- A. The Contractor shall provide temporary security fence around the perimeters of the construction site.
 - 1. Fence is to be chain link, a minimum of 6 feet high, and properly secured galvanized steel pipe at 10'-0" on-center as support posts.
 - 2. Each post shall be plumb.
 - 3. The fence and supports shall remain the property of the Contractor and be promptly removed at the appropriate time.
- B. The Contractor shall install temporary security fencing around the outside perimeter of the project site to replace any existing fencing damaged or required to be removed during construction.
- C. At no time shall the Contractor end the workday or vacate a project site without having the perimeter of the project site secured with required existing, new or temporary security fencing.

2.07 EROSION CONTROL

- A. The Contractor shall provide measures to keep the ground surface well drained, but avoid erosion of embankments, excavations, the project site, and adjacent areas.
- B. The Contractor shall comply with all local codes, rules, and regulations concerning soil erosion.
 - 1. Use inlet protection or silt fences to control erosion to the satisfaction of the Engineer and regulatory agencies. Use inlet protection or silt fences to stop silt and sediment from reaching parking lots and roads
 - 2. Leave erosion control methods in place until ground cover is established or until date of substantial completion.
- C. The Contractor shall install erosion control measures as shown on the Drawings.
- D. The Contractor shall provide and place 600 linear feet of silt fencing for purposes of Emergency Stormwater Mitigation. Should use of this fencing become necessary, personnel performing the work must arrive at the site within one hour after the Contractor's superintendent or designated representative is alerted of an emergency. Fencing is to be placed at the direction of the Owner or Engineer. Each emergency is to include the use of 3 laborers, superintendent and a backhoe. The cost of 5 such emergencies, along with the silt fencing, is to be included in the bid price. The Owner is to be credited for any amount remaining at the end of the project.
- E. Comply with the requirements also contained in Section 015719 - Temporary Environmental Controls. Submit an Erosion Control Plan as specified therein and comply with the Project's published Stormwater Pollution Prevention Plan.

2.08 DUST CONTROL

- A. The Contractor shall provide measures to control dust resulting from the work.
- B. Control dust at locations and in such quantities and frequencies as required to prevent dust from becoming a nuisance to the surrounding area.
- C. In the event the Contractor does not adequately provide for dust control, or should insufficient quantities of dust control agents be placed and Contractor fails to place additional quantities within 4 hours after Engineer's direction, Owner will perform the required work by whatever means deemed expedient and all expenses incurred by Owner will be charged to and paid by Contractor.

- D. Take care in selecting and applying dust control agents so as not to make roadways or walkways slippery, muddy or hazardous. Dust control agents shall be acceptable to the Engineer.

2.09 RUBBISH REMOVAL

- A. The Contractor shall be responsible for overall rubbish removal.
- B. Burning of rubbish and trash will not be permitted.
- C. The Contractor shall clean up trash as specified in Section 011400 - Work Restrictions or more often if the trash interferes with the work of others, presents a hazard or if directed by the Engineer.
- D. Dispose of rubbish and waste materials in accordance with state regulations and local ordinances.
- E. The Contractor shall also place rubbish containers at locations selected by the Engineer.
 - 1. Furnish adequately sized rubbish containers from the date of initial mobilization to the date of final payment.
 - 2. As a minimum, the Contractor shall furnish two (2) 55-gallon general trash containers. Secure the top of each container to the container.
 - 3. Secure the container itself so that it does not get blown about the site.
 - 4. Take sole responsibility to secure the container and trash from being blown about the site.
 - 5. Be responsible for maintaining the site free of trash.

2.10 SNOW REMOVAL

- A. Snow removal on all structures under construction by the Contractor and not turned over to the Owner for full time operation shall be the responsibility of the Contractor. Coordinate the placement of removed snow with the Owner
- B. On public streets under construction of the sewer work, the Contractor will coordinate with the Town of Riverhead to ensure that the "Street Opening Permit" addresses the issue and conditions of responsibility for the plowing of snow

2.11 ENCLOSURES

- A. The Contractor shall provide and maintain temporary enclosures, sheds, or fenced-in areas to accommodate protection for products, material and equipment.
- B. Store equipment that cannot be exposed to outdoors in accordance with Section 016500 - Product Delivery, Storage and Handling.

2.12 SECURITY

- A. The Contractor shall provide security and facilities to protect work from unauthorized entry, vandalism and theft.
- B. Coordinate with Owner's security program, if applicable.
- C. The Contractor has full responsibility for the working area until final acceptance and payment.
- D. It shall be the Contractor's responsibility to lock all gates to the site, and on the access road, at the end of each work day.

- E. All on-site employees shall bear, at all times, an identification badge, conspicuously worn, which shall include, at a minimum, a passport or similar size photograph, the name of the employee and the name of the company.
- F. Any employee working on site without a photo identification badge will be instructed to leave the site.
- G. All company vehicles shall be conspicuously identified, through sufficiently sized lettering on both the passenger and driver sides, with the company name, address and telephone number.
 - 1. All employee owned vehicles shall have an 8-1/2 inch by 11 inch sign with the company name, address and telephone number placed on the dashboard on the driver side.
 - 2. Vehicles may be subject to search by the Owner or owner's representatives.
 - 3. Any vehicle that does not have the company name, address and telephone number will not be permitted on the Owners' property.
- H. Submit to the Owner a complete listing of all employees that will or might be performing work at the project site.
 - 1. Furthermore, provide sufficient information as may be required for the Owner to conduct background checks, in accordance with the Fair Credit Reporting Act.
 - 2. Background checks may be performed at the discretion of the Owner due to the sensitive nature of the work and the extensive, and sometimes unsupervised, access to Owner property and buildings.
 - 3. The Contractor shall be required, on request from the Owner, at any time prior to or during the work, to provide releases from its employees and officers to the Owner, H2M, and a background search firm, hired by either the Owner or H2M, to conduct background checks in accordance with the Fair Credit Reporting Act and applicable state law.

2.13 DAMAGES

- A. The Contractor, with the prior approval of the Owner/Engineer, shall promptly repair any damage, directly or indirectly caused by the Contractor's operations.
- B. All repairs shall be to the complete satisfaction of the Owner and equal in quality to that which pre-existed.

2.14 FIRST AID FACILITIES & EMERGENCY TELEPHONE NUMBERS

- A. The Contractor shall provide and maintain adequately equipped first aid facilities in a location or at locations that are readily accessible to workers, Engineer and visitors to the site.
- B. Provide at least one on-site employee who is properly trained in first aid and who shall be available to render first aid whenever construction is in progress.
- C. Provide a list of emergency telephone numbers as specified above.
- D. Post the list of emergency telephone numbers as directed by the Engineer.

2.15 POLLUTION CONTROL

- A. Do not permit pollutants, such as chemicals, fuels, lubricants, calcium chloride, sewage, water containing sediments and other deleterious, poisonous, toxic or oxygen demanding substances to enter or leach into streams, lakes, wetlands, other surface waters, into groundwater, or into the air.

- B. In waters used for public water supply or used for trout, salmon or other game or forage fish spawning or nursery, control measures must be adequate to assure that turbidity in the receiving water will be increased not more than 10 standard turbidity units (s.t.u.) in the absence of other more restrictive locally established limitations, unless otherwise permitted by the State.
- C. In no case shall the classification for the surface water be violated, unless otherwise permitted by the State.
- D. In water used for other purposes, the turbidity shall not exceed State limits.

2.16 REMOVALS

- A. Remove all items provided under this Section except as otherwise specified.

PART 3 - EXECUTION

3.01 PROTECTION OF EXISTING UTILITIES AND PUBLIC WORKS

- A. Maintain and protect existing utilities and public works including, but not limited to, conduits, sewers, water mains, electric and telephone conductors or conduits, and gas mains encountered during the construction.
- B. In the event that it is not possible to cross over, under, around or otherwise avoid the existing utility, the owner of the utility shall be notified that the utility must be altered or moved.
- C. In the event that damage shall result to any service pipe for water or gas, or any private or public sewer or conduit, the Contractor shall immediately, and at its own expense, repair same to the satisfaction of the Engineer.
- D. Any contents from the pipes, sewers or conduits shall be immediately removed and disposed in accordance with applicable laws.

3.02 REMOVAL OF UTILITIES, FACILITIES AND CONTROLS

- A. Remove temporary above grade or buried utilities, equipment, facilities and materials, immediately following substantial completion and prior to release of retainage.
- B. Remove underground installations to a minimum depth of 2 feet.
- C. Regrade site to restore to existing slope and elevation, and restore the surface.
- D. Clean and repair damage caused by installation or use of temporary work.
- E. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.
- F. Remove temporary parking and access roads.
- G. Regrade area to existing slope and elevation and restore the surface to its existing condition.
- H. Final payment will not be processed until all removals have been completed to the satisfaction of the Owner/Engineer.

3.03 PROTECTION OF EXISTING PROPERTY

- A. Protect existing structures and finishes during performance of the work.

- B. Protect existing trees and plants during performance of the work.
- C. Do not deposit excavated materials or store materials around trees or plants or attach guy wires to trees.

END OF SECTION 015000

PART 1 - GENERAL

1.01 SUMMARY

- A. Furnish all labor, materials, equipment and appliances necessary to maintain both vehicular and pedestrian traffic, to protect the public from all damage to person and property, and to minimize inconveniences to the residences and businesses adjacent to the Contract area for the duration of the Contract in accordance with the specifications, the appropriate State, County or local agency, and in accordance with the Manual of Uniform Traffic Control Devices (MUTCD).
- B. When vehicular or pedestrian traffic, or both, are to be maintained over existing highways within the scope of the Project, plan and carry out the Work to provide for the safe and convenient passage of such traffic.
- C. Keep the portion of the Project that is open to traffic in such condition that traffic will be adequately accommodated. Provide and maintain in a safe condition temporary approaches or crossings and intersections, and access to trails, roads, streets, businesses, parking lots, residences, garages, and driveways. Notify the owners of adjoining properties at least 24 hours prior to the time planned to begin any work that will interfere with their normal passage. Special attention shall be given to student crossing areas. When students are present, all the Contractor's equipment shall reduce the moving speed and stop when children are crossing the street.
- D. A Police Officer shall be utilized when work is done at the intersection with heavily traveled roads.

1.02 SYSTEM DESCRIPTION

- A. Maintain traffic over a reasonably smooth travelway which shall be so marked by signs, delineations and/or other methods so that a person who has no knowledge of conditions can safely, and with a minimum of discomfort and inconvenience, ride, drive or walk over all or any portion of the roadway under construction. This shall include the maintenance of temporary pavement in accordance with the appropriate temporary pavement specifications.
- B. Maintenance and protection of traffic over roadways during construction is considered as important and necessary an item of work as is the actual construction itself. Conduct operations in a manner to ensure the safety of motorists, pedestrians and employees.
- C. Protect the user from damage to person and property by reason of any construction operation (i.e., painting, paving, blasting, tree work, demolition, etc.) by such protective screens, devices or methods as are approved by the appropriate governing agency.
- D. The Contractor shall be responsible for the maintenance within the limits of the Contract of the entire pavement, drainage facilities and other highway elements, both old and new, beginning on the date construction commences and ending on the date the Contract is officially accepted.
- E. Schedule work to minimize the amount of the old travelway that is destroyed or substantially damaged at any one time.
- F. Throughout the course of the work, the health and welfare of the people shall be provided for. At least one-week in advance of proposed work, ascertain the specific needs of individuals whose homes or places of business may be inaccessible for periods of time while required work is in progress. In all such cases, make all arrangements with health, safety and protective agencies to ensure that emergency or incidental needs of seriously hampered people will be addressed. Roads shall not be closed to traffic completely during the work.

- G. Separate payment will not be made for the detours. All costs thereof shall be included in the price bid for the assorted items of maintenance of traffic.
- H. If the Contractor reroutes traffic over detours that are not specified to be established, obtain approval of the local authorities having jurisdiction. Make all necessary arrangements with such authorities regarding the establishment, maintenance and repair of such detours, the regulations and direction of traffic thereon, and signing. Adequate directional and detour signs, acceptable to the local authorities, shall be furnished by the Contractor and shall be erected by him at the locations where such authorities may direct. The cost of all work regarding such detours shall be borne by the Contractor.
- I. Maintain access to driveways at all times during work. This may require daily relocation of breakaway barricades, or provide provisions for temporary driveway access.

1.03 SUBMITTALS

- A. Submit a detailed maintenance and protection of traffic scheme and schedule to the appropriate local agency and secure written approval from that agency prior to beginning work. Submit a copy of the approved plan. The Traffic Control Plan shall provide for the treatment of conditions caused by and encountered during the work on the Project.
- B. The Traffic Control Plan shall be based on the requirements provided in the MUTCD and Section 619 of the New York State Standard Specifications. Conduct work in accordance with the provisions of the traffic control or detour plan. Deviate from the plan only if approved by the local agency or Engineer.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Materials used shall comply with the requirements for the assorted items or materials as established in the specifications or the Contract plans. Traffic control devices need not be new but shall be in good condition.
- B. Temporary signs, delineators, attenuators, barricades, lighting and other warning and guiding devices shall be as approved by the appropriate State, county and local agency, and shall remain the property of the Contractor.
- C. Cones shall be standard 28-inch height. The minimum diameter at the base shall be 12-inches. Cone color: orange.
- D. Thirty- to fifty-gallon drums or containers set on end may be used as delineators, provided they are orange with white reflectorized bands. Other markers or delineators may be circular or rectangular in shape, and shall be constructed of reflective sheeting having a minimum area of 20 square inches or reflective buttons having a minimum diameter of three inches.
- E. All materials, equipment and workmanship for electrical installations shall comply with the Standard Code Requirements. Electrical work shall be performed by licensed electricians. Obtain, supply and pay for all required electrical permits, certificates and energy. Make all necessary arrangements with the utility company for service points.
- F. Warning signs used in conjunction with work zone activities shall have an orange background with black legend.

- G. Provide Portable Variable-Message Signs with cellular communications for the duration of the project in accordance with Section 619-3.10 of the New York State Department of Transportation Standard Specifications, and latest addenda.

PART 3 - EXECUTION

3.01 PROTECTION

- A. General - provide a travelway suitable for maintaining a minimum of one lane of traffic in each direction. Keep travelway well-drained and reasonably smooth and hard at all times, and free of potholes, bumps, irregularities and depressions that hold or retain water.
- B. Prior to beginning work, place traffic control devices where shown on the submittal or directed by the roadway authority having jurisdiction.
- C. Erect barricades, detour signs, warning lights and other facilities approved by the State or appropriate agency at the beginning, end and for the entire length of any detours to adequately warn the traveling public that the road is closed and indicate the direction and route of the detour. Conduct operations to ensure a minimum of delay to traffic.
- D. Furnish, erect and maintain proper reflectorized signs, indicating to motorists the status of the work in or adjacent to the roadway.
- E. Traffic control devices shall also be placed to provide traffic control for personnel doing inspections, sampling, testing, or taking measurements required for the project.
- F. Keep signs clean, mounted at the indicated height and placed to be effective both day and night. Sign supports shall display the sign panel in a vertical position. Use signs, warnings, delineators and barricades to adequately inform the motorist of any unusual or unsafe condition and to safely and clearly guide driver through the Contract area. Place and light such signs, barricades, warnings or devices to give timely warning and permit the motorist to take the necessary action to traverse the area safely. Barricades and signs shall be lighted when and as required. Prevent or minimize glare from lights that may interfere with traffic and that may disturb residents.
- G. Delineate areas where there is a drop-off near the edge of the travel lanes and areas on which it is unsafe to travel. Where the drop-off is less than six inches and where soft or unsafe areas occur, an approved delineator shall be placed along the edge of the travelway at intervals of not more than 200 feet. Where the drop-off is greater than 18 inches, a continuous delineation consisting of a white board or band shall be used in addition to individual delineators.
- H. Keep signs, delineators and markers clean at all times.
- I. All reflective delineators or markers shall be yellow or amber in color, except those at entrances to commercial establishments, where a green reflective marker shall be placed on each side of the designated safe entrance to the establishment. Keep the entire entrance area between adjacent green markers safe and smooth for convenient ingress and egress. Mount delineators so that the bottom of the reflective unit is four feet above the elevation of the travelway. Any area judged by the roadway agency with jurisdiction to be particularly hazardous shall be marked by use of signal flashers with a large reflectorized orange lens in addition to the reflective markers.
- J. All signs, markers and other facilities shall indicate actual conditions existing and shall be moved, removed or changed immediately as conditions require. Details and types of signs, temporary barricades, timber curb and other devices are shown on Standard Structure Sheets, Manual of Uniform Traffic Control Devices, of the New York State Department of

Transportation. These are minimum requirements. The Contractor shall have an adequate quantity of each available for use as required. If conditions warrant additional signs may be required. In that event, they shall be consistent with the arrangements, material requirements and details of those shown on the Standard Structure Sheets.

- K. Lighted barricades shall be fully equipped with complete electrical facilities including fixtures, lamps, conduits, switches, cut-outs, boxes, cable and all other required equipment, appurtenances and connections to the service points designated by the utility company as necessary to install and light the barricades. Set and adjust time switches and other equipment as required to put the lighting system in satisfactory operation.
- L. Use lights during hours of low visibility to delineate traffic lanes and to guide traffic.
- M. Flashing arrowboards shall be positioned at the beginning of the taper for all mainline travel lane closures. One arrowboard shall be used for each taper. The arrowboards shall be mounted so that the base of the panel is at least seven (7) feet above the pavement surface. Arrowboards shall not be used for lane shifts where there is no reduction in the number of lanes.
- N. Whenever it is necessary to maintain traffic, employ a sufficient number of competent trained flag persons during the time traffic is to be maintained. Provide a sufficient number of competent flagpersons in areas where traffic is congested, particularly where construction equipment is operating. Workers shall wear hard-hats and safety vests in accordance with Section 107-05 of the Standard Specifications of the New York State Department of Transportation. Flagpersons shall wear orange hard-hats and safety vests while flagging. Flagpersons shall be equipped with stop/slow paddles and follow the procedures stipulated for flagpersons in the MUTCD. Flagpersons should be instructed in their duties. Flagpersons shall be in good physical condition including sight and hearing, mentally alert, and shall have a courteous but firm manner, neat appearance and a sense of responsibility for the safety of the public. Safety shirt, jacket and vest garments shall be reflectorized for nighttime operations with reflective material that shall be orange in color. When controlling traffic, traffic directors shall be equipped with STOP/SLOW paddles
- O. Employ flag persons to assist directing and channelizing traffic safely away from the construction operations. The Contractor shall bear all cost for flag persons. Incorporate in the price bid for the various items that require traffic control.
- P. If the Contractor fails to maintain roads in a safe and passable condition, the Owner shall have the right to order this work done by others at the cost and expense of the Contractor. The Contractor will be given notice of unsatisfactory condition of the submitted to the Contractor; the Owner may order this work done and deduct the cost of it from payment due under this Contract.
- Q. Equipment or machinery having crawler tracks or other treads that mar or damage pavements shall not move over or operate from newly constructed or existing pavements unless precautions are taken to prevent damage to the pavements.
- R. Damage to existing pavements within the limits of the Project or adjacent thereto, which in the opinion of the Engineer was caused by the Contractor's operations shall be repaired by the Contractor as directed by the Engineer, at the Contractor's expense or the repairs will be made by others and the cost of such repairs will be deducted from moneys due the Contractor.
- S. Any restrictions of required traffic lane widths or diversion of traffic at any time will be subject to the approval of the Engineer and Township.
- T. Except as necessary during actual working hours, and then only with the specific approval of the Engineer, the Contractor shall not occupy with his equipment, materials or personnel, any roadway or sidewalk area within or adjacent to the Project that is open to traffic.

- U. Work which closes or alters the use of existing roads and streets shall not be undertaken until adequate temporary or permanent provisions for traffic have been approved by the Engineer, the Chief of Police, and the Fire Prevention Bureau. The Traffic Safety Coordinator of the Board of Education shall be notified.
- V. Where it is necessary for pedestrians to cross, or walk within the limits of the Project, provide, maintain and remove temporary sidewalks as shown on the Plans or directed by the Engineer.
- W. Maintain all barricades, detour signs, warning lights and other facilities throughout the work. Do not remove barricades, detour signs, warning lights and other facilities until directed to by the governing road agency.

3.02 MAINTENANCE

- A. Furnish materials, labor and equipment at any time, day or night, to immediately repair, remedy and prevent washouts, formation of holes, ruts and depressions, sunken trenches and the destruction or sinking of temporary pavements. This applies when the work is underway and when the work is temporarily suspended for any period. Special attention shall be given to maintenance of a satisfactory travelway over weekends, holidays and during the winter season.
- B. Damage to any portion of the work occasioned by lack of adequate maintenance shall be repaired by the Contractor at his own expense.

3.03 ACCESS

- A. Construct and maintain at all times, where required, temporary bridges or bridging across pipe trenches, excavations, obstructions and newly laid pavements to provide adequate ingress and egress for pedestrian and vehicular traffic to and from private driveways, business and commercial establishments or for main street intersections and heavily traveled crossings.
- B. After the installation of all pipes and necessary appurtenances thereto, immediately backfill all trenches; compact same with the surface of the fill graded off; and install temporary pavement to permit the resumption of traffic without delay. The surfaces of all trenches shall be maintained continually by the Contractor to carry traffic smoothly, safely and without interruptions or slowdowns until the permanent pavement has been restored.

3.04 EXISTING SIGNS

- A. All existing highway signs and supports within the Contract limits are to remain under the control and jurisdiction of the Engineer, and shall be properly maintained for the duration of the Contract by the Contractor.
- B. When shown on the plans or ordered, remove existing signs; store, protect and keep them clean; and replace them in the Contract area designated by the Engineer. Signs not to be replaced shall be cleaned and delivered to the entity that installed the signs as directed by the Engineer.
- C. Signs or markers lost or damaged because of negligence on the part of the Contractor shall be replaced at the Contractor's expense.

END OF SECTION 015526

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Control of environmental pollution and damage that the Contractor must consider for air, water, and land resources in preparing a bid and while constructing the project. This Section includes management of site aesthetics, noise, solid and liquid waste and wastewater, and other pollutants that may be generated by the Contractor.
- B. Include all costs associated with environmental protection as specified herein and as specified in other Sections of these specifications in the total price bid.
- C. Comply with all provisions of the Stormwater Pollution Prevention Plan (SWPPP).

1.02 DEFINITIONS

- A. Environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents which:
 - 1. Adversely effect human health or welfare,
 - 2. Unfavorably alter ecological balances of importance to human life,
 - 3. Impact wetlands,
 - 4. Effect other species of importance to man, or;
 - 5. Degrade the utility of the environment for aesthetic, cultural, and historical purposes.
- B. Definitions of Pollutants:
 - 1. Sediment: Soil and other debris that has been eroded and transported by runoff water.
 - 2. Solid Waste: Rubbish, debris, garbage, and other discarded solid materials resulting from industrial, commercial, and agricultural operations and from community activities.
 - 3. Rubbish: Combustible and noncombustible wastes such as paper, boxes, glass and crockery, metal and lumber scrap, tin cans, and bones.
 - 4. Debris: Combustible and noncombustible wastes, such as leaves, tree trimmings, ashes, and waste materials resulting from construction or maintenance and repair work.
 - 5. Chemical Waste: Petroleum products, bituminous materials, salts, acids, alkalies, herbicides, pesticides, organic chemicals, and inorganic wastes.
- C. Sanitary Wastes:
 - 1. Sewage: Domestic sanitary sewage and human and animal waste.
 - 2. Garbage: Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.01 PROTECTION OF ENVIRONMENTAL RESOURCES

- A. Protect environmental resources within the project boundaries and those affected outside the limits of permanent work during the entire period of this Contract. Confine activities to areas defined by the Contract Documents.
- B. Protection of Land Resources: Prior to construction, identify all land resources to be preserved within the work area. Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, top soil, and land forms without permission from the Engineer. Do

not fasten or attach ropes, cables, or guys to trees for anchorage unless specifically authorized, or where special emergency use is permitted.

- C. Work Area Limits: Prior to any construction, mark the areas that require work to be performed under this Contract. Mark or fence isolated areas within the general work area that are to be saved and protected. Protect monuments, works of art, and markers before construction operations begin. Convey to all personnel the purpose of marking and protecting all necessary objects.
- D. Protection of Landscape: Protect trees, shrubs, vines, grasses, land forms, and other landscape features shown on the drawings to be preserved by marking, fencing, or using any other approved techniques.
 - 1. Box and protect from damage existing trees and shrubs to remain on the construction site.
 - 2. Immediately repair all damage to existing trees and shrubs by trimming, cleaning, and painting with antiseptic tree paint.
 - 3. Do not store building materials or perform construction activities closer to existing trees or shrubs than the farthest extension of their limbs.
- E. Reduction of Exposure of Unprotected Erodible Soils: Plan and conduct earthwork to minimize the duration of exposure of unprotected soils. Clear areas in reasonably sized increments only as needed to use. Form earthwork to final grade as shown. Immediately protect side slopes and back slopes upon completion of rough grading.
 - 1. Temporary Protection of Disturbed Areas: Construct diversion ditches and berms to retard and divert runoff from the construction site to protected wetlands areas as defined in the Clean Water Act and federal, state and local regulations.
 - 2. Erosion and Sedimentation Control Devices:
 - a. Construct or install all temporary and permanent erosion and sedimentation control features as shown or specified in the Contract Documents and as required by the Owner pursuant to direction of the regulatory authority.
 - b. Maintain temporary erosion and sediment control measures such as berms, dikes, drains, hay bales, erosion control fencing, sedimentation basins, grassing, and mulching, until permanent drainage and erosion control facilities are completed and operative.
 - 3. Manage borrow areas on and off Owner property to minimize erosion and to prevent sediment from entering nearby property, watercourses and local streets.
 - 4. Manage and control spoil areas on and off Owner property to limit spoil to areas shown on the Environmental Protection Plan and prevent erosion of soil or sediment from entering nearby property, watercourses or streets.
 - 5. Protect adjacent areas from degradation by temporary excavations and embankments.
- F. Handle and dispose of solid wastes in such a manner that will prevent contamination of the environment.
 - 1. Place solid wastes (excluding clearing debris) in containers that are emptied on a regular schedule.
 - 2. Transport all solid waste off Owners' property and dispose of waste in compliance with Federal, State, and local requirements.
 - 3. Store chemical waste away from the work areas in corrosion resistant containers and dispose of waste in accordance with Federal, State, and local regulations.
 - 4. Handle discarded materials other than those included in the solid waste category as directed by the Engineer.
- G. Protection of Water Resources: Keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters and sewer systems. Implement management techniques to control water pollution by the listed construction activities that are included in this Contract.

- H. Washing and Curing Water: Do not allow wastewater directly derived from construction activities to enter water areas. Collect and place wastewater in retention ponds allowing the suspended material to settle, the pollutants to separate, or the water to evaporate.
- I. Control movement of materials and equipment during construction to prevent violation of water pollution control standards of the Federal, State, or local government.
- J. Protection of Fish and Wildlife Resources:
 - 1. Keep construction activities under surveillance, management, and control to minimize interference with, disturbance of, or damage to fish and wildlife.
 - 2. Prior to beginning construction operations, list species that require specific attention along with measures for their protection.
- K. Particulates: Control dust particles, aerosols, and gaseous by-products from all construction activities, processing, and preparation of materials (such as from asphaltic batch plants) at all times, including weekends, holidays, and hours when work is not in progress.
- L. Particulates Control: Maintain all excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and all other work areas within or outside the project boundaries free from particulates which would cause a hazard or a nuisance. Sprinkle, chemical treatment of an approved type, light bituminous treatment, baghouse, scrubbers, electrostatic precipitators, or other methods are permitted to control particulates in the work area.
- M. Hydrocarbons and Carbon Monoxide: Control monoxide emissions from equipment to Federal and State allowable limits.
- N. Odors: Control odors of construction activities and prevent obnoxious odors from occurring.
- O. Reduction of Noise: Minimize noise using every action possible. Perform noise-producing work in less sensitive hours of the day or week as directed by the Engineer. Maintain noise-produced work at or below the decibel levels and within the time periods specified in accordance with OSHA and local ordinances, whichever is more restrictive.
 - 1. Perform construction activities involving repetitive, high-level impact noise only between 8:00 a.m. and 5:00 p.m. unless otherwise permitted by local ordinance or by the Engineer.
 - 2. Repetitive impact noise on the property shall not exceed the following dB limitations:
 - 3. Provide sound-deadening devices on equipment and take noise abatement measures that are necessary to comply with the requirements of this Contract, consisting of, but not limited to, the following:
 - a. Use shields or other physical barriers to restrict noise transmission.
 - b. Provide soundproof housings or enclosures for noise-producing machinery.
 - c. Use efficient silencers on equipment air intakes.
 - d. Use and maintain efficient intake and exhaust mufflers on internal combustion engines.
 - e. Line hoppers and storage bins with sound deadening material.
 - f. Conduct truck loading, unloading, and hauling operations so that noise is kept to a minimum.

END OF SECTION 015719

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. The operations, equipment, and materials necessary to maintain wastewater flow at all times during the work.
 - 1. Conduct operations in such a manner as to insure optimum health and safety.
 - 2. Provide uninterrupted flow conveyance around work locations. Furnish all materials, labor, equipment, spare parts, maintenance, control, power, and signal wiring, etc., to provide temporary systems to bypass sanitary sewer flow around the work area and maintain wastewater flow in all public and private pipes while construction is in progress. The system shall prevent back up in sanitary sewage and allow for proper inspection, rehabilitation, testing, and drainage during pipe replacement, manhole installation, replacement, or rehabilitation, or related rehabilitation work.
 - a. Maintain traffic on roadways and access to driveways and parking areas during the bypassing operations.
 - b. Bypass system shall be of sufficient capacity to handle existing flow plus additional flow that may occur during rainfall.
 - c. Sewer surcharging will not be allowed.
 - d. Maintain temporary bypass system in operation until service can be completely restored.
 - 3. Design, installation, maintenance, and operation of the temporary bypass pumping systems shall be the Contractor's responsibility. This Section outlines the minimum requirements that shall be adhered to by the Contractor and is intended to be a performance specification. The bypass systems shall meet the requirements of all codes and regulatory agencies having jurisdiction. The Contractor shall not be permitted to overflow, bypass, pump or by any other means convey sewage to any land, street, storm drain or water course.
 - 4. The Contractor shall be responsible for design of the temporary pumping systems, including all bulkheads, plugs, hoses, piping, pumps, valves, instruments, and appurtenances. As a component of system design, the Contractor shall be responsible for determining pump duty point and TDH based on final suction and discharge piping layout.
 - 5. Operating labor will be required on an "around the clock basis" for the bypass pumping.
- B. Pump raw sewage back into the sanitary system.
- C. Be completely responsible for the violation of any law, or the creation of a danger to public health, due to laxity in the diversion of flows.

1.02 SYSTEM DESCRIPTION

- A. Each temporary pump shall be capable of conveying the design operating flow rate.
 - 1. Refer to the hydraulic profile for design flow information.
 - 2. The temporary sanitary wastewater conveyance system for replacement of the 12-inch diameter sanitary sewer from sanitary manhole 4 to sanitary manhole 2, shall be based on an estimated average daily flow rate or approximately 0.45 million gallons per day (MGD) and an estimated peak hourly flow rate of approximately 1.32 million gallons per day (MGD).
 - 3. The flow varies throughout the day.
 - 4. The lowest flow typically occurs between the hours of 1:00 a.m. and 6:00 a.m.
 - 5. Flow will be higher during precipitation.
 - 6. Bypass pumping system shall be capable of bypassing flow around the work area as necessary for satisfactory performances of work. Actual flows shall be measured by the Contractor before bypass pumping system submittal is submitted.

- B. Provide pump control elements such as floats to prevent surcharging of wastewater into the piping system and overflow from structures.
- C. Pumps handling raw and partially treated wastewater shall be capable of passing a sphere of at least 3-inches in diameter.
- D. Pump suction and discharge openings shall be at least 4-inches in diameter.
- E. E. All pumps shall be of a rugged design and capable of running dry without damage to the pump.
- F. Maintain sanitary conditions to allow work to be performed. Protect equipment, suction piping, and discharge piping main from inclement weather, freezing conditions, and traffic.
- G. Prevent leakage and spillage of wastewater.
- H. Provide walkways over obstructions on sidewalks to maintain pedestrian traffic.
- I. Provide ramps or below grade piping to maintain vehicular traffic.
- J. Provide alarm system to indicate increase above normal operating liquid level in wet well / tank/ sewer.
- K. Electrical system and components in sewers and raw wastewater wet wells shall comply with the National Electric Code requirements for Class I, Group D, Division 1 locations.
- L. Noise levels shall not exceed the levels indicated in Section 015000.
- M. Provide spare suction and discharge piping at the project site.
- N. For temporary sanitary wastewater conveyance systems located in roadways, provide signs and traffic controls in accordance with the State Manual of Uniform Traffic Control Devices.
- O. Obtain confined space entry permit from Owner if confined space entry is needed for work under this section.

1.03 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Provide a written plan of the proposed temporary sanitary wastewater conveyance system to the Architect/Engineer at least two weeks prior to the need for the system.
 - 1. The written plan shall include number size and type of pumps, material, diameter and proposed route of piping and/or hoses, control system, back-up and spare equipment, and estimated duration of bypass operation.
 - 2. Provide a schematic diagram of the system if so, requested by the Architect/Engineer.
 - 3. Provide a written emergency response plan that indicates the action to be taken by the Contractor should there be a failure of a component of the wastewater conveyance system.
- C. Submit a schedule to complete the work. That includes the sequencing and coordination of sanitary sewer bypass pumping, new sanitary sewer installation, and manhole replacement/installation and the dewatering coordination with property owners dewatering operations.

- D. Submit measured sanitary sewer flow and sewage flow rates for each bypass pumping system location.
- E. Submit a list of 24-hour emergency telephone numbers that shall include the Contractor's Project Manager, the Contractor's Foreman, and a responsible representative from the pump supplier.
- F. Prepare a detailed description of the proposed pumping system and submit it and the vendor's references with his bid proposal. Bid proposals without an acceptable detailed plan for the temporary pumping system shall be rejected.
- G. Prior to construction prepare and submit a comprehensive bypass pumping plan and written description that addresses the quantity, capacity, and location of all pumping equipment. All pumping equipment submitted shall include the manufacturer's performance curves. The size, type and routing of all suction and discharge pipes and the means of connecting the system shall also be included in addition to the following minimum requirements:
 - 1. Provide all necessary means to safely convey the normal flows past the work area. It will not be permitted to stop or impede the main or any sideline flows under any circumstances.
 - 2. Pumps and accessories shall be supplied by the pump manufacturer.
 - 3. Pumps shall be fitted with a fully automatic priming system incorporating an air compressor, air ejector assembly, and an air/water separation tank. No water shall be required in the pump to achieve a prime. The air ejector shall operate on the discharge side of the compressor, eliminating the possibility of water being drawn into the air source. The pump must be capable of running totally dry for periods up to 24 hours.
 - 4. The priming system shall not use a vacuum or diaphragm pump, nor require the use of a "Foot" type valve. It shall contain no moving parts or protective float gear. A demonstration of the pumps ability to repeatedly cycle from pump/snore/repriming/pump shall be required.
 - 5. Diesel engine driven pump units shall be mounted on a trailer that can be towed on the road at 50 M.P.H. and wired for over the road usage, per applicable D.O.T. Standards.
 - 6. All pumps used shall be centrifugal, end suction, fully automatic self-priming units that do not require the use of foot-valves, vacuum pumps, or diaphragm pumps in the priming system.
 - 7. Contractor shall be responsible for the prevention of accidental spillage of flows. All shall be constructed of rigid pipe with positive type CH, leak proof connections. Discharge hose will only be allowed by specific permission of the Engineer.
 - 8. Provide the necessary start/stop controls for each pump.
 - 9. Provide adequate hoisting equipment for each pump. Maintain accessories on the site.
 - 10. Insure that the temporary pumping system is properly maintained, and a responsible operator shall be on hand at all times when pumps are operating.
 - 11. The Contractor's bid price shall include maintaining one stand-by pump on site. In addition, spare pipe and fittings shall also be provided.
 - 12. Place temporary pumping system in service for a minimum of 24 hours before any other work may begin. System shall remain operable for at least 72 hours after the repairs are completed and its removal is approved by the engineer in writing.
 - 13. Once written permission is issued, remove all temporary pumping system components. Perform all restoration work to the satisfaction of the Engineer.
 - 14. Material and equipment schedules listing material types and equipment capacities.

1.04 QUALITY ASSURANCE

- A. Design, installation, and operation of the temporary pumping system shall be the Contractor's responsibility.

- B. Submit the qualifications of a subcontractor who can demonstrate to the engineer that he specializes in the design and operation of temporary bypass pumping systems. Submit at least 5 references of projects of a similar size and complexity as this project performed by proposed subcontractor within the past three years.
- C. Upon acceptance by the Engineer of the subcontractor, submit at least 21 days prior to installation a detailed plan and description outlining all details and provisions of the temporary bypass pumping systems. The plan shall be specific and complete, including such items as schedules, locations, elevations, capacities of equipment, materials, standby equipment and materials and all other incidental items necessary and/or required to insure proper operation of the bypass pumping system, including protection of the access and bypass pumping locations from damage due to the discharge flows, and compliance with the requirements and permit conditions specified in these Contract Documents. No bypass pumping shall begin until all provisions and requirements have been reviewed and approved.
- D. Temporary bypass pumping systems shall include the following:
 - 1. Staging areas for pumps and ancillary equipment.
 - 2. Flow stoppage system, including pipe and channel plugging method and types of plugs.
 - 3. Number, size, material, location, and method of installation of all piping and valves.
 - 4. Sections showing suction and discharge pipe depth, and embedment, if applicable.
 - 5. Pump and pipe anchoring details.
 - 6. Suction tube installation, bracing and support in the sewer.
 - 7. Discharge pipe thrust and restraint block sizes and locations.
 - 8. Temporary pipe supports, and anchoring required.
 - 9. Plan indicating proposed location of bypass pumping line locations including provisions for access to bypass pumping locations. Drawings shall include standard scale and dimensions to existing referenced site features.
 - 10. Downstream discharge plan.
 - 11. Method of protecting discharge manholes or structures from erosion and damage;
 - 12. Bypass pump dimensions, capacity, pump performance curves, quantity of pumps and power requirements.
 - 13. Calculations for selection of bypass pumping pipe size including static lift, friction losses, and flow velocity.
 - 14. Pump curves showing pump operating range plotted against the system head curve.
 - 15. Pump diesel engine sizing, dimensions, emissions data, and location plan.
 - 16. Standby power generator size and location.
 - 17. Engine and pump noise enclosure details.
 - 18. Engine fuel consumption curves.
 - 19. Fuel storage tank details.
 - 20. Qualifications of site pump operators.
 - 21. Emergency contact telephone numbers.
 - 22. Complete information on instruments, including calibration certificates.
 - 23. Complete operating procedures, including mode of operation, sequence of starting and stopping the pumps, coordination with Owner.
- E. The bypass system shall meet the requirements of all codes and regulatory agencies having jurisdiction.
- F. The Contractor shall be responsible for damages upstream of pumps due to bypass pumping backups and/or overflows caused by a failure of the approved system.
- G. No bypass activities shall be permitted to commence until all requirements have been reviewed and approved by the Owner and Engineer.

- H. Maintaining continuous pumping within the collection system is critical and shall be maintained at all times. If any spills of raw wastewater occur due to the failure of the Contractor to maintain the temporary pumping when needed, the Contractor shall be responsible for any fines levied on the Owner by the NYSDEC or any other applicable agency.

PART 2 - PRODUCTS

2.01 PRODUCTS

- A. All pumps used shall be submersible units or fully automatic self-priming units in good working order, with a working pressure gauge that do not require the use of foot-valves or vacuum pumps in the priming system. The pumps may be electric, or diesel powered. All pumps used must be constructed to allow dry running for long periods of time to accommodate the cyclical nature of effluent flows. Pumps conveying raw and partially treated wastewater shall be capable of passing a sphere of at least 3-inches in diameter.
- B. Provide solids handling ball type check valve with flexible rubber seat and quick release access feature with centrifugal pumps.
- C. Provide the necessary stop/start controls for each pump. Provide a float switch system to automatically control the operation of the pumps in response to level changes in the sanitary sewer. In the event that a backup is imminent, immediately activate standby bypass pump(s) to decrease the water level at the bypass manhole.
- D. Provide compact unit mounted on skid base or two-wheeled highway trailer. Either option shall include overnight running fuel tank.
- E. Adequate standby equipment shall be available and ready for immediate operation and use in the event of an emergency or breakdown. Include one stand-by pump of each size that will be installed on-line, ready for use in the event of primary pump failure isolated from the primary system by a valve.
- F. Engines shall be equipped with critical silencers and be housed to minimize noise during operation. Sound attenuation shall comply with the applicable noise code regulations for the specific zone classification, or as specified by the Owner.
- G. Engine driven pumps shall have adequate fuel storage capacity to operate continuously for 24 hours without refueling. Auxiliary fuel containers shall be provided to supplement integral fuel tanks as required. Fuel deliveries shall only be made during normal daytime working hours.
- H. Furnish and install all suction and discharge piping. Piping, joints, and accessories shall withstand at least twice the maximum system pressure or 50 psi, whichever is greater. All piping and fittings shall be steel with Victaulic couplings or flanged joints or fused high-density polyethylene pipe DR-11 as manufactured by Performance Pipe or equal. Individual pump suction piping shall be provided. Suction piping shall have bell ends. Suction piping shall be installed so that both barrels of the interceptor can feed bypass pumps. The piping shall be installed so that obstruction to the flow is minimal. The pipes shall be adequately braced and supported to resist flow of water.
- I. Discharge Piping - In order to prevent the accidental spillage of flows, all discharge systems shall be temporarily constructed of rigid pipe with positive, restrained joints. Under no circumstances will aluminum type piping or glued PVC pipe be allowed. Discharge hose will only be allowed in short sections and by specific permission from the Engineer. Protect from inclement weather, freezing conditions, and traffic. Pump discharge piping may be individual or manifolded and valved so that pump can be conveyed to dedicated locations. Air relief valves shall be provided at high points in the piping. The maximum discharge pipe velocity at the exit

shall be less than 11 feet/second. The discharge pipe shall extend into the receiving manhole so that there is neither splashing out of the manhole nor siphoning.

- J. Provide plugs in the upstream manhole to prevent flow from the upstream sanitary sewer through the sewer in the work location.
- K. Provide temporary power and lighting systems for 120V lighting to illuminate the site of the temporary pumping stations, and 120V to power instruments and control panels that are not powered or lit by existing site systems. Provide all labor and materials necessary to install temporary electric power.
- L. Spill containment around diesel pumps and storage tanks, including filling operation shall be provided in accordance with applicable regulations.
- M. Electrical system and components in sewers shall comply with National Electric Code requirements for Class I, Group D, Division 1 locations.
- N. Obtain confined space entry permit from Owner for personnel working in manholes.
- O. Road Crossings: Fabricated of galvanized steel and engineered to provide minimal head-loss when used on pumping projects. Road crossing shall be manufactured to remain in compliance with federal bridge laws of 20,000 lbs. single axle. Entrance and exit ramps shall be sloped. Piping connections shall be flanged. Vehicle width clearance 12 feet. Tie downs at each corner out of path of vehicle travel. Manufacturer: Rain for Rent.

2.02 PERFORMANCE

- A. Provide all pipeline plugs, and pumps of adequate size to handle the system flow, and temporary discharge piping to ensure that the total flow can be safely diverted around installation of the new section of sanitary sewer.
- B. Make all arrangements for bypass pumping during the time when the sewer is shut down for any reason. System must overcome surcharge by tidal influence and groundwater.
- C. Noise and Hours of Operation: All bypass pumping activities shall comply with New York State, and Local Noise Ordinances. Use sound attenuated enclosures on all pumps and power packs to muffle pump noise at no additional compensation. "Quiet" bypass pumping shall be accomplished by the use of a "quiet" brand of critically silenced pump(s). Sound attenuated pump enclosures shall be 14-gauge sheet metal lined with 1-inch and 2-inch layers of polydamp acoustical sound deadening material to achieve a noise reduction to a maximum of 65 dBA at a distance of 30 feet or as otherwise required by local ordinances. All exhaust pipes shall be muffled.
- D. Diesel engines shall be equipped with "critical" rated mufflers.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Test temporary conveyance system to the satisfaction of the Architect/Engineer prior to usage.
- B. Provide personnel to continuously attend the bypass system to assure continuous wastewater conveyance for entire time use of system is required.
- C. Locate the bypass pipelines to minimize disturbance to existing utilities and obtain approval of the pipeline locations from the Owner. Locate bypass pumping and piping equipment on property and easements possessed by the Owner.

- D. During all bypass pumping operation, protect existing structures and equipment from damage inflicted by any equipment. The Contractor shall be responsible for all physical damage to the existing structures and equipment caused by human or mechanical failure. Replace any section of the manhole damaged during the bypass operation.
- E. exercise caution and comply with OSHA requirements paying special attention to conditions when working inside existing structures, in the presence of gases, combustible or oxygen-deficient atmospheres, and confined spaces.
- F. Upon completion of the bypass pumping operations, and after the receipt of written permission from the Owner, remove all the piping, and restore all property and pavement to pre-construction condition.

3.02 PLUGGING AND BLOCKING

- A. Insert a sewer line plug into the line at a manhole upstream of the sewer section in which work is to be performed.
 - 1. Design of the plug shall allow all or any portion of the sewage flow to be released in an emergency.
 - 2. Remove plug and restore normal flow following the specified rehabilitation work.
- B. Flow Control Precautions:
 - 1. When flow in a sewer line is plugged, blocked, or bypassed, take sufficient precautions to protect sewer lines from damage due to surcharging.
 - 2. Take precautions to insure that sewage flow control operations do not cause flooding or damage to adjacent property.
 - 3. Repair any damage due to lack of flow control at no cost to the Owner.
- C. When plugging or blocking is no longer needed for performance and acceptance of work, remove in a manner that permits the sewer flow to slowly return to normal without surge, to prevent surcharging or causing other major disturbances downstream. When bypass pumping operations are complete, drain piping into the sewer prior to disassembly.

3.03 PUMPING AND BYPASSING

- A. Supply necessary pumps, conduits, and other equipment to divert the flow of sewage around the location in which work is to be performed.
- B. Furnish necessary labor, supervision, and materials to set up and operate the pumping and bypass system.
- C. Be responsible for sewage spills and sewage back-ups into buildings plus costs and fines associated with the clean-up of sewage spills and sewage back-ups.

3.04 SAFETY REQUIREMENTS

- A. Be familiar with Safe Working Requirements in confined spaces.
- B. Perform gas-free testing prior to entering each manhole, and periodically throughout the workday.
- C. If dangerous, hazardous, or explosive gases are detected, remove these by forced ventilation to a level permitting entry in accordance with OSHA regulations.

3.05 SYSTEM STARTUP

- A. Once the installation is completed, a trained representative from the pump supplier shall inspect the installation and verify in writing that the installation is complete in all aspects and ready to run as intended on a continuous basis.
- B. The Temporary Bypass Pumping System shall be tested before bypass operations can be scheduled. The Contractor shall run each of the pumps for a minimum of 2 hours of continuous run time to prove the reliability of the entire installation. No more than two pumps per pump station may be tested simultaneously. All tests shall be conducted during normal daytime working hours. All the testing shall be conducted only with the approval of the Owner. Once the reliability has been established to the satisfaction of the Engineer, the temporary bypass pumping operations can be scheduled.
- C. Prior to bypass pumping operations, meet with the Owner and Engineer to develop step-by-step pumping operating strategy, communication protocol, and procedures for interaction between the Owner and Contractor.

3.06 FIELD QUALITY CONTROL

- A. Dedicated experienced pumping systems operators shall be present on site 24 hours a day on a continuous basis when system is utilized.
- B. The experienced pumping systems operator shall be trained to turn on and off the pumps in response to the working water levels in the sewer and shall provide assistance to the Contractor. Operation of the bypass pumping system shall be coordinated with construction activities.
- C. The pump supplier's representative shall be available by cellular telephone at all times.
- D. The Contractor shall subject the pump discharge piping for all systems to a pressure test of 45 psi for 4 hours using clean water prior to actual operation. No loss of pressure or visible leakage will be allowed. The Contractor shall provide blind flanges to allow capping of both ends of the piping during testing. The Contractor shall give the Owner and Engineer 24 hours' notice prior to testing.
- E. Inspect bypass pumping system every two hours to ensure that the system is working correctly.
- F. During bypass pumping, do not allow sewer flow to be leaked, dumped, spilled, or discharged in or onto any area outside of the existing sewer system.
- G. In the event of overflow, immediately stop the discharge and take action to clean and stabilize disturbed area at his or her own expense and promptly notify the Owner.
- H. Prevent back-up of sanitary sewer in existing sanitary sewer network to avoid local flooding and basement flooding.

3.07 MAINTENANCE

- A. Insure that the temporary pumping system is properly maintained. a responsible operator shall be on hand at all times when pumps are operating.
- B. Supply all necessary lubrication, fuel, electric power and supplies necessary to maintain the entire installation.
- C. Spare parts for pumps and piping shall be kept on site as required.

- D. Adequate hoisting equipment for each pump and accessories shall be maintained on the site.

END OF SECTION 015720

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section includes the general requirements for products that are to be furnished, installed, or otherwise incorporated into the project.

1.02 QUALITY ASSURANCE APPLIES TO ALL PRODUCTS

- A. In addition to the Contractor's warranties and guarantees on materials and equipment required under the General Conditions of the Contract and the Technical Specifications contained hereinafter, the Contractor shall also be responsible for all materials, equipment, and products that have or is planned to be incorporated into the work.
 - 1. The Contractor shall be responsible for the finished work and that it accurately and completely complies with these Contract Documents.
 - 2. The Contractor shall be responsible for work performed by subcontractors, equipment suppliers, and material vendors.
 - 3. The Contractor shall be satisfied as to the product's performance before it is ordered for installation. At the Contractor's option, he/she shall have tested each product to determine compliance with these specifications.
- B. The Engineer may check all or any portion of the work and the Contractor shall afford all necessary assistance to the Engineer in carrying out such checks.
 - 1. Such checking by the Engineer shall not relieve the Contractor of any responsibilities for the accuracy or completeness of the work.
 - 2. Such checking is a courtesy service being provided by the Owner and does not relieve the Contractor of his/her responsibilities under this Construction Contract.
- C. If witnessed shop tests or inspections are required at the point of manufacture, the Contractor shall keep the Engineer advised as to the progress of the work to allow inspection at the proper time and place. Provide at least two (2) weeks advance notice before scheduled shop tests.
- D. Should a dispute arise as to the quality of workmanship, equipment or material performance, then the final decision regarding acceptability with these Contract Documents shall be that of the Owner.
- E. At the request of the Engineer, the Contractor shall promptly provide the services of a competent representative of the manufacturer at the project site, fully equipped and prepared to answer questions, perform tests, make adjustments and to prove compliance with the Contract Documents free of all additional charges. Proof of compliance shall be the responsibility of the Contractor, and such special visits to the project site by the manufacturer shall not be eligible under any cash allowances or stipulated man-hours necessary to startup the system and/or train the Owner as may be specified in the Technical Specifications.

1.03 QUALITY ASSURANCE - EQUIPMENT

- A. Erect and install products under the supervision of a competent and experienced superintendent. The method of installation, including anchorage, clearances, and tolerances for rotating assemblies, methods of support for equipment and adjacent piping, shall be as recommended by the equipment manufacturer unless detailed on the Drawings or specified.
- B. All material furnished shall be new, and guaranteed free from defects in workmanship, installation, and design.
- C. Design and fabricate equipment in conformance with ANSI, ASTM, ASME, ASHRAE, IEEE, NEC and NEMA Standards.

1. Equipment shall withstand the stresses that may occur during fabrication, testing, transportation, installation and conditions of operation.
 2. Pumps shall conform to the requirements of the Hydraulic Institute.
 3. Equipment shall comply with the latest OSHA regulations and the ANSI Safety Standards.
- D. Equipment shall be products of manufacturers who produce evidence of their ability to promptly furnish any and all interchangeable replacement parts as may be needed at any time within the expected life of the equipment.
- E. Manufacturers shall also have readily available access to suitable and accurate testing facilities for performing the required shop tests.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. Equipment shall have been in successful regular operation under comparable conditions for a period of at least five (5) years.
1. This time requirement does not apply when the manufacturer posts an Owner/Engineer acceptable Performance Bond or Letter of Credit for the duration of the time period that will guarantee replacement of the equipment in the event of failure.
 2. The bond shall be in a form that is acceptable to the Owner's legal council.
- B. The Owner reserves the right to reject any material or equipment manufacturer who, although he appears to be qualified and meets the technical requirements, does not provide satisfactory evidence indicating adequate and prompt post-installation repair and maintenance service, as required to suit the operational requirements of the Owner.
- C. Whenever it is required that the Contractor furnish materials or manufactured articles or shall do work for which no detailed specifications are set forth, the materials or manufactured articles shall be of the best grade in quality and workmanship obtainable on the market from firms of established good reputation, or, if not ordinarily carried in stock, shall conform to the usual standards for first-class materials or articles of the kind required.
- D. Perform work in full conformity and harmony with the intent to secure the best standard of construction and equipment of the work as a whole or in part.
- E. Items of any one type of material or equipment shall be the product of a single manufacturer.
1. For ease of the Owner in maintaining and obtaining service for equipment and for obtaining spare parts from as few places as possible, to the maximum extent possible, use equipment of a single manufacturer.
 2. The Engineer reserves the right to reject any equipment from various manufacturers if suitable equipment can be secured from fewer manufacturers and to require that source of materials be unified to the maximum extent possible.
- F. Substitute equipment shall not be fabricated nor installed until after written decision to accept request is received from the Engineer.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Prior to work under any Section, carefully inspect the existing work and verify that it is complete to the point where the work under that Section may properly commence.
- B. Avoid the need to remove and replace work and to avoid unnecessary cutting and patching.

- C. Inspect all surfaces to be sure that they have been properly prepared before applying new work to such surfaces.
- D. Verify that all work can be installed in strict accordance with the drawings and the approved shop drawings. Immediately report discrepancies to Engineer.
- E. Do not proceed with the work under any Section until these conditions are obtained.

3.02 INSTALLATION

- A. Furnish and install materials and equipment in accordance with the instructions of the applicable manufacturer, fabricator or processors, except as otherwise provided in the Contract Documents.
- B. All work shall be done in a workmanlike manner and set to proper lines and grades. The work shall be square, plumb and/or level as the case may be.
- C. Where performance criteria are specified, do all work necessary to attain the required end results.

3.03 FIELD QUALITY CONTROL

- A. Neither observations by Engineer nor inspections, tests or approvals by other persons shall relieve the Contractor from his obligations to perform the work in accordance with the requirements of the Contract Documents.
- B. If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to specifically be inspected, tested or approved by some public body, the Contractor shall assume full responsibility therefore, pay all costs in connection therewith, and furnish the Engineer with the required certificates of inspection, testing or approval.
- C. The Owner reserves the right to independently perform laboratory tests on random samples of material or performance tests on equipment delivered to the site.
 - 1. These tests, if made, will be conducted in accordance with the appropriate referenced standards or specification requirements.
 - 2. The entire shipment represented by a given sample, samples or piece of equipment may be rejected on the basis of the failure of samples or pieces of equipment to meet specified test requirements.
 - 3. All rejected materials or equipment shall be removed from the site, whether stored or installed in the work, and the required replacements shall be made, all at no additional cost to Owner.

3.04 ADJUST AND CLEAN

- A. Upon the completion of installations, and as a condition of its acceptance, visually inspect all work, adjust all components for proper alignment and touch-up abrasions and scratches to make them completely invisible.
- B. Thoroughly examine all materials and equipment with protective or decorative finishes for defects and damage prior to being covered.
 - 1. In the case of buried items of work, restore protective surface covers so as to conform to the Contract Documents prior to being backfilled, buried or embedded, as the case may be.

3.05 UNCOVERING WORK

- A. Unless otherwise specified or directed by Engineer, no work shall be covered until it has been observed, tested, photographed, measured, and authorized to be covered by Engineer.
- B. Tie distances to above ground physical structures as reference points to all underground utilities, conduits, pits, manholes, valves, and pipelines shall be obtained by the Contractor prior to covering the work. Immediately comply with the Engineer's direction to uncover the work if tie distances were not obtained.
- C. If any work has been covered with Engineer's consent and Engineer considers it necessary or advisable that covered work be observed or tested, the Contractor, at Engineer's request, shall uncover, expose or otherwise make available for observation, or testing as Engineer may require, that portion of the work in question, furnishing all necessary labor, material and equipment.
 - 1. If it is found that such work is defective, the Contractor shall bear all the expenses of such uncovering, exposure, observation, and testing of satisfactory reconstruction, including compensation for additional engineering services and an appropriate deductive change order shall be issued.
 - 2. If, however, such work is not found to be defective, the Contractor shall be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to such uncovering, exposure, observation, testing and reconstruction if he makes a claim therefore as provided in the General Conditions.

3.06 DEFECTIVE WORK

- A. The repair, removal, replacement and correction of defective work is a part of this Contract and shall be promptly performed in accordance with the requirements set forth in the General Conditions or other portions of the Contract Documents. All costs in connection with the correction of defective work shall be borne by the Contractor.
- B. Products that fail to maintain the performance or other salient requirements of the Contract Documents, shows undue wear, or other deleterious effects during the maintenance period, shall be considered defective.

END OF SECTION 016100

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. The Section includes the transportation, handling, storage and protection of products that are to be incorporated into the work.
- B. The procedures for turning equipment over to the Owner for installation by others is also included herein.

1.02 GENERAL

- A. Items shall be delivered as complete assemblies direct from the manufacturer with all internal wiring, piping, valving, and control devices intact except where partial disassembly is required by transportation regulations, protection of components, or where physical constraints may exist or be created for the setting of the item.
- B. Coordinate the disassembly and reassembly requirements with the manufacturer. Determine the need and extent of reassembly prior to bid.
 - 1. All labor, material and equipment costs associated with the disassembly and reassembly of the product shall be included in the Contract Price.
 - 2. Where reassembly of equipment is necessary, then the manufacturer shall provide reassembly instruction at the project site.
 - 3. A technician shall be present during the entire reassembly procedure and the manufacturer shall certify, in writing, that the unit was reassembled properly in accordance with instructions provided by the manufacturer and that all as-specified warranties remain in effect.
 - 4. The manufacturer's reassembly inspection time shall be in addition to the field service time specified and shall be included in the Contract Price. This time shall not be eligible for payment under any cash allowance item.
- C. In the case where equipment is to be installed by others, then the supplying contractor shall be responsible for its reassembly. If reassembly is necessary and the unit(s) are to be set inside an enclosure or building, reassemble the equipment inside said enclosure. The equipment once reassembled shall be turned over to the installing contractor as specified below.

1.03 PACKING

- A. Transport products in containers, crates, boxes or similar means such that the products are protected against damage that may occur during transportation.
- B. All parts shall be packaged separately or in container where parts of similar systems are grouped.
- C. Part numbers shall be indicated on the individual part. Use indelible ink to mark part numbers.
- D. All equipment shipments shall be included with a parts list showing a description (name) of the part and the manufacturer's part number.
 - 1. The parts list shall be shipped in a plastic zippered envelope with the words "Parts List" lettered on it in indelible ink.
 - 2. The parts list shall be placed inside the shipping container so that it is on the top of the contents.
- E. Equipment shall be shipped with storage, handling and installation instructions.

1. The Engineer reserves the right to withhold payment for equipment delivered to the site until such time as the storage, handling and installation instructions are supplied by the manufacturer.
 2. In the case where operation and maintenance manuals have been provided by the manufacturer, which includes the installation instructions, then the installation instructions shall also be included with the equipment shipment.
- F. The Contractor shall require the manufacturer to be responsible for the proper packing of all products.

1.04 SHIPPING AND DELIVERY

- A. Product deliveries shall be accompanied with a bill of lading indicating the place of origination and the Contractor's purchase order number.
- B. Inspect shipments immediately upon delivery, to assure compliance with requirements of the Contract Documents and those products are undamaged.
- C. Promptly remove damaged material and unsuitable items from the job site.
- D. Provide equipment and personnel to handle products by methods to prevent soiling; disfigurement or damage.

1.05 STORAGE

- A. Store sensitive products and all spare parts in weather tight, climate controlled enclosures in an environment favorable to product.
- B. Store and protect products in accordance with the manufacturer's instructions.
- C. All other products that are to be installed underground or products such as pipe, valves, and fittings shall be stored outdoors but shall be blocked off the ground and covered with impervious sheet coverings.
- D. Store fabricated products above the ground on blocking or skids.
- E. Store loose granular materials in well-drained areas on solid surfaces to prevent mixing with foreign matter.
- F. Provide adequate ventilation to avoid condensation.
- G. In accordance with manufacturer's instructions protect bearings, couplings, shafts, rotating components, and assemblies. Protection of said equipment shall be continuous until the time the equipment is placed into permanent service.
- H. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.
- I. Do not store volatile liquids in any building on site.
- J. Storage of products shall be the responsibility of the supplying contractor. The installing contractor shall take all necessary precautions to protect the equipment being furnished by others.
- K. Store with seals and labels intact and legible.

1.06 PROTECTION OF WORK

- A. The Contractor shall protect the installed work. All costs for protection shall be borne by the Contractor. Provide coverings as necessary to protect installed products from damage, from traffic and subsequent construction operations. Remove when no longer needed.
- B. Cover and protect equipment from dust, moisture or physical damage. Protect finished floor surfaces prior to allowing equipment or materials to be moved over such surfaces. Maintain finished surfaces clean, unmarred and suitably protected until accepted by the Owner.
- C. Additional time required to secure replacements and to make repairs will not be considered by the Engineer to justify any extension in the Contract Time of Completion. In the event of the damage, promptly make replacement and repairs to the approval of the Engineer at no additional costs.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 016500

PART 1 - GENERAL

1.01 SUMMARY

- A. Testing of piping.
- B. Testing of tanks vented to atmosphere.
- C. Pipe leakage testing shall comply with the conditions noted in the Schedule.

1.02 DEFINITIONS

- A. Leakage (or exfiltration) - The quantity of water to be supplied into the newly laid pipe, any valved section thereof, manhole, or other appurtenance, necessary to maintain the specified leakage test pressure after the pipe has been filled with water and the air expelled.
- B. Infiltration - The quantity of water that enters into any pipe, manhole, or other appurtenance when the static groundwater elevation is at the maximum elevation above the pipe or appurtenance as specified hereinafter.

1.03 QUALITY ASSURANCE

- A. Prior to Substantial Completion, pressure pipes and non-pressure pipes shall meet specific leakage requirements. These leakage requirements shall be satisfied by the basic materials alone. Where joint fillers and the like have been specified, primarily to protect jointing materials, and secondarily to provide a factor of safety, they shall not be applied until after leakage tests have been completed and have been accepted by Engineer.
- B. Engineer will witness tests. Tests not witnessed will be considered as not having been performed.
- C. Do not close or cover up work until it has been observed for proper and satisfactory construction and installation in compliance with the Contract Documents. Should incomplete or unacceptable work be covered, the Contractor shall, at his/her own expense, uncover all work so that it may be properly observed. After such observations, repair and replace the work that was found defective, unsatisfactory, and not in accordance with the Contract Documents. After such repair and replacement, bring all work to completeness and status as it was before it was closed and covered, all at the Contractor's own expense. Submit for review and approval proposed corrective action to correct failed systems.
- D. Successful completion of required tests shall be in no way interpreted as relieving the Contractor of responsibility for defects that become apparent subsequent to the time of testing. It shall be the sole right of the Engineer to determine whether defects exist. Retest all portions of the work deemed necessary by the Engineer prior to Substantial Completion.

1.04 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Provide details and specifications on testing apparatus.
- C. Provide certified test results on forms approved by the Engineer.

1.05 SEQUENCING AND SCHEDULING

- A. Notify Engineer and governing agencies, if necessary, at least 48 hours in advance of a scheduled test so that the test may be witnessed.

- B. Test underground pipe prior to backfilling.
- C. At Engineer's discretion, additional sections of pipelines may be required to be tested as soon as pipe is laid and prior to backfilling when working conditions or the standard of workmanship have been altered.

PART 2 - PRODUCTS

2.01 TESTING APPARATUS

- A. Provide labor, plugs, measuring equipment, and other apparatus, complete, to perform testing.
- B. Provide clean water, air, nitrogen, and other materials as required to accomplish testing.
- C. Provide plugs and caps capable of withstanding test pressures.
- D. Provide temporary flanges, plugs, bulkheads, thrust blocks, weighing, bracing and other items necessary to prevent joints from separating, and to prevent injuries or damage.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Plug open ends, adequately block bends, tees, ends, and other fittings, and do whatever is necessary to brace piping system so that it will safely withstand the pressures developed under the tests and so that no damage or injury shall occur to the pipeline, people or property.
- B. Before tests are conducted, isolate, or remove any regulator, gauge, trap, or other apparatus or equipment that may be damaged by test pressures.

3.02 GENERAL

- A. Trapped Air: Trapped air may cause a false indication of the rate of leakage. Points of concern include ends of lines, stubs, house connections and high points in pipelines. No credit will be made for this condition and no adjustment will be made to the allowable leakage. When trapped air is suspected of causing a test failure, do whatever is necessary to evacuate the air and repeat tests until the actual leakage is equal to or less than allowable rate of leakage.
- B. Water Absorption: No credit will be given for absorption of water in pipe and manhole walls. If necessary, fill pipes and manholes with water well in advance of testing and allow them to soak in order to eliminate or minimize the effects of absorption.

3.03 TESTS FOR NON-PRESSURE PIPING

- A. General:
 - 1. Leakage shall be determined by exfiltration testing. The Engineer reserves the right to also require infiltration testing.
 - 2. Air testing is not permitted.
 - 3. Leakage testing shall include the main non-pressure pipe, house connections, and appurtenances on the section of pipeline being tested.
 - 4. Limit pipeline test sections to runs between adjacent structures. Manholes may be tested simultaneously with pipes.
 - 5. Adequately plug ends of house connections, stubs, and openings from which water may escape.
 - 6. Use clean water for exfiltration tests.

7. Determine groundwater levels by installing piezometers, test holes or test pits at intervals not to exceed 1,000 feet.

B. Pipe Exfiltration Test:

1. The minimum water level required for testing is 4 feet above the crown of the upstream (highest) end of the pipe being tested or 2 feet above the maximum groundwater level along the test section, whichever is greater.
2. Install a watertight plug in the downstream end of the manhole pipe.
3. Fill upstream manhole with water and conduct test for six (6) hours.
4. Upon satisfactorily completing the test, remove the downstream plug in the presence of Engineer. Do not touch nor remove anything until approved by Engineer.
5. Maximum allowable exfiltration is one hundred (100) gallons per inch diameter per mile per day.

C. Pipe Infiltration Test:

1. The minimum head of groundwater required for infiltration testing is 2 feet above the crown of the pipe at the upstream end but must in all cases reach its normal level.
2. Infiltration may be measured with an approved graduated container capable of intercepting all inflow, by a pipeline V-notch weir, or by other approved methods. When using instream type measuring devices, do not measure flows until steady state conditions are established.
3. Maximum allowable infiltration is one hundred (100) gallons per inch diameter per day per mile of pipe.
4. Where groundwater level is at least 2 feet above the highest manhole joint, manholes may be included in the test. No visible leakage will be permitted in manholes.

3.04 ALLOWABLE LEAKAGE

- A. The maximum allowable leakage for the various piping systems is presented in the schedule.

3.05 RETESTING

- A. Pipes, tanks and manholes not passing the tests shall have all defects corrected with methods approved by the Engineer to the inspection and satisfaction of Engineer, and shall be retested and re-corrected as often as is necessary until the test requirements have been met.
- B. It is the intent of this Contract to obtain work meeting test requirements on their own and solely through the use of the normal integral sealing components.
1. Joint leaks shall not be stopped using concrete, caulking, mortar, or other patching materials.
 2. Leaking pipe joints shall be re-jointed and leaking manhole joints shall have joints reset, or replaced if necessary.
- C. Methods other than rejoining, resetting or replacing joint seals shall require the written approval of Engineer.

3.06 SCHEDULE

LEAKAGE TESTING REQUIREMENTS

SERVICE	FLUID	PRESSURE	DURATION (HRS.)	ALLOWABLE LEAKAGE (NOTE 1)		
				UNDERGROUND		EXPOSED
				INFIL.	EXFIL.	
NON-PRESSURE PIPING	WATER	4FT.	6	100	100	NONE

SCHEDULE NOTES:

- Maximum allowable leakage in gallons/day/inch diameter/mile of pipe, or gallons/day/inch diameter/mile for manholes. Where a percentage is shown, the loss shall not exceed the percentage of the starting test pressure.

END OF SECTION 017550

PART 1 - GENERAL

1.01 SUBMITTALS

- A. Submit the following documents to the Engineer before Substantial Completion:
 - 1. Final Survey as specified in Section 013223.
 - 2. Construction Photographs as specified in Section 013233.
 - 3. Project Record Documents as specified in Section 017839.
- B. Submit the following items to the Engineer with the final application for payment:
 - 1. Final Application for Payment and continuation (G702 and G703)
 - 2. Contractor's Certified Payrolls
 - 3. OSHA cards for all workers
 - 4. Contractor's Affidavit of Payment of Debts and Claims (G706)
 - 5. Contractor's Affidavit of Release of Liens (G706A)
 - 6. Final list of Subcontractors (G705)
 - 7. Subcontractor's Affidavit of Payment of Debts and Claims (G706) - (for each subcontractor used)
 - 8. Subcontractor's Affidavit of Release of Liens (G706A) - (for each subcontractor used)
 - 9. Consent of Surety to Final Payment (G707)
 - 10. 1 year Maintenance Bond - 100% of contract including change orders
 - 11. Contractors letter guaranteeing workmanship 2 years
 - 12. Product data, Maintenance manuals and Warranty Information
 - 13. As Built Documentation
 - 14. Attic Stock / Spare Parts (provide proof of delivery transmittal signed by owner)
 - 15. Training and Demonstrations (provide sign-in from training session)
 - 16. Asbestos Affidavit and waste manifests
- C. All documents shall be complete, signed, dated, and notarized (where applicable) and be subject to the Engineer's acknowledgment of receipt or approval.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 017800

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section includes:
 - 1. Maintenance of documents
 - 2. Recording of record information
 - 3. Submission of record documents
- B. Work of this section also includes the furnishing of underground pipeline documentation.

1.02 PLANS AND SPECIFICATIONS FURNISHED TO THE CONTRACTOR

- A. Two (2) complete sets of Contract Documents (plans, specifications and addenda) will be furnished to the Contractor.
- B. Additional sets will be furnished to the Contractor at \$500 per set.
- C. One (1) complete set of Contract Documents shall be kept in the field office.

1.03 MAINTENANCE OF DOCUMENTS

- A. The Contractor shall maintain at the site one (1) set of the following: drawings, specifications, addenda, change orders, approved shop drawings, test reports, operations and maintenance manuals, and shop drawing log.
- B. The Contractor shall make these documents available for use by the Owner, Engineer, regulatory agencies and other parties designated by the Owner.
- C. Provide a drawing rack for storage of plans.
- D. Maintain these documents in a clean, dry, legible condition throughout the entire contract period.
- E. Make documents available at all times for inspection by Engineer and Owner.
- F. At close of project, turn over field office file to Engineer.
- G. As-built records must be kept up-to-date as the Work requiring as-built records progresses and must be available for review by Engineer.
- H. Progress payments will NOT be able to include quantities for underground piping, cleanouts, and structures in the Schedule of Values for work completed and as-built documents are not submitted per Item G below.
- I. The Contractor must submit to the Engineer record drawings in AutoCAD Civil3D format and on flash drive projected in NAD 83 State Plane New York Long Island FIPS 3104 Feet, and in PDF format. Including all sewer works structures and piping, including elevations showing all as-built information required in Section 013223 – Surveying within 10 Working Days of completion of that portion of the Work.
- J. These as-built records must be accurate, clean, clear, easily readable, and will become part of the official as-built record set for the applicable portion of the Work to be submit as complete set at substantial completion.

1.04 RECORDING OF RECORD INFORMATION

- A. Affix a stamp to each Contract Drawing and Shop Drawing reading as follows: "RECORD DOCUMENT" - "NAME OF PROJECT" - "CONTRACTOR NAME" in 2-inch high printed letters. The stamp shall be specifically prepared for this project.
- B. Keep the record documents current as the work progresses. Record information concurrent with construction progress.
- C. Contract S - Included in a lump sum amount of \$5,000 in the bid amount for preparation of record drawings.
 - 1. 33% will be paid from following final submission of "FINAL RECORD DRAWINGS" has been accepted and approved by the Engineer
 - 2. A percentage of the remaining 66% for individual sheets of the as-built drawings will be released when each individual sheet of the as-built drawings has been accepted by the Engineer as per Section 1.03G.
 - 3. Satisfactory evidence shall be provided by the Contractor demonstrating compliance with these specifications and said drawings have been delivered and deemed in compliance with the specifications by the Engineer.
- D. Do not permanently conceal any work until required information has been recorded.
- E. Concurrent with each submission of a contractor partial payment requisition, the contractor shall submit a paper copy of up to date record drawings, including the latest corrections. Incomplete or inaccurate record drawings will be sufficient grounds for refusal to process payment requisition.
- F. Legibly mark the Contract Plans to record actual construction, including, but not limited to the following:
 - 1. All as-built work.
 - 2. All approved field changes and conditions.
 - 3. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
 - 4. Location of underground conduits, boxes, devices. Wire sizes (AWG) and types installed. Number of active and spare wires in each conduit and conduit size (applicable where work involves electrical construction).
 - 5. Tied-down location of all underground process lines and buried valves.
- G. Shop Drawings: Maintain as record documents. Legibly mark-up to show changes made due to field conditions encountered during construction.

1.05 PROJECT RECORD DOCUMENTS

- A. Maintain a complete and accurate log of control and survey work as it progresses.
- B. The Contractor shall on completion of major site improvements, prepare a certified survey illustrating dimensions, locations, angles, and elevations of construction, site work and underground facilities installed as work of the Contract.
- C. The Contractor's surveyor site drawings shall also show the location of property line perimeter fence. The property line of the site shall be indicated on the plans.

1.06 SUBMITTAL OF RECORD DOCUMENTS

- A. The Contractor shall deliver to the Engineer three (3) full-size sets of drawings and one (1) PDF electronic copy detailing as-built chemical treatment installations, one (1) month prior to the date of startup of the plant site as outlined in the construction schedule. These shall be submitted to the Health Department by the Engineer for certification of installation and inspection. Drawings shall be submitted by the Contractor to the Engineer in accordance with the requirements of this Section.
- B. At Substantial Completion, the Contractor shall deliver one (1) preliminary record set of as-built documents to the Engineer with all changes conspicuously ballooned or otherwise emphasized.
- C. The work will not be considered substantially complete until such time as the preliminary record documents are delivered and acceptable to the Engineer. Mark this set "Preliminary Record Drawings".
- D. Prior to Final Completion, the Contractor shall conform the preliminary record drawings to the comments made by the Engineer and then provide the Owner a complete reproducible set of as-built drawings: supply drawings in AutoCAD Civil3D format (AutoCAD 14 or higher) and on CD in a GIS shapefile projected in NAD 83 State Plane New York Long Island FIPS 3104 Feet, and in PDF format. Include all sewer works structures and piping, including elevations. Provide one set of full-size prints with each submission.
- E. As-built drawings shall be the same size as the Contract Drawings, with 1/2-inch margins space on three sides and a 2-inch margin on the left side for binding.
- F. Each drawing shall bear in the title box the words "FINAL RECORD DRAWINGS" and the name of the Contractor in heavy black lettering 1/2 inch high and be certified as complete and accurate.
- G. Electronic media made available is without guarantee of compatibility with the Contractor's software or hardware.
 - 1. If the Contractor wishes to take advantage of this offer, the Contractor will be required to execute an indemnification and hold harmless agreement with the Engineer.
 - 2. Electronic media will be provided free of charge on disc in a zipped format.
 - 3. Electronic media shall be returned to the Engineer upon acceptance of the as-built drawings by the Owner.

1.07 RELATED DOCUMENTS

- A. Provide certificate of release of liens if requested by the Engineer.
- B. Provide underground pipeline documentation as per Section 013223 – Surveying.
- C. Provide construction photographs as per Section 013233 – Construction Photographs

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 017839

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Retain an independent utility locator service company with a minimum of five (5) years of experience to field locate, mark, and stakeout existing underground utilities and service connections. The company shall be equipped with the latest state-of-the-art equipment.
- B. If required, determine the exact location of utilities by hand excavated test pits or through vacuum methods. Support and protect all utilities to remain in place.
- C. Field locate, mark, and stakeout underground utilities prior to excavation.
- D. Use different colored markers for each separate utility run. Immediately take digital photographs to document the mapped utilities and provide same to the Engineer.
- E. Contractor shall be responsible for the location of all utilities within areas of excavation, and all costs associated with the repair of utilities hit/damaged during construction.

1.02 SUBMITTALS

- A. Submit detailed experience and qualifications description of underground utility locator service. Experience and qualifications package should include a description of the types of utility locator equipment and experience that can be provided.
- B. At conclusion of project, provide two (2) sets of paper and one (1) copy of electronic plans documenting all utilities located and identified. All documentation shall be referenced to existing data (horizontal and vertical) previously established.

1.03 COORDINATION AND SCHEDULING

- A. General Location: Within areas of excavations all utilities shall be field located and their locations marked at least one (1) day prior to the performance of the required excavation.
- B. The performance of hand excavated test pits or vacuum excavations to determine the utilities exact location shall be performed just prior to performing the work to minimize the time that excavated areas will be exposed to erosive conditions.
- C. Coordinate work with the Engineer to minimize utility disruptions and facility operations. The Engineer shall be notified at least three (3) working days prior to performing the work, and should be provided a schedule for the works progression

PART 2 - PRODUCTS

2.01 NOT USED

PART 3 - EXECUTION

3.01 FIELD QUALITY CONTROL

- A. The Engineer may limit or restrict scheduling of the utility locator service based upon project progress.

END OF SECTION 023000

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Demolition and removal of structures and site improvements.
 - 2. Abandoning in-place below-grade construction.
 - 3. Disconnecting, capping or sealing, and abandoning in-place site utilities.
- B. Related Sections:
 - 1. Section 011000 "Summary of Work" for use of the premises and phasing requirements.
 - 2. Section 013233 "Construction Photographs" for preconstruction photographs taken before building demolition.

1.02 DEFINITIONS

- A. Demolish: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged.
- B. Recycle: Recovery of demolition waste for subsequent processing in preparation for reuse.
- C. Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner. Include fasteners or brackets needed for reattachment elsewhere.

1.03 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.04 SUBMITTALS

- A. Proposed Protection Measures: Submit informational report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers.
 - 1. Adjacent Buildings: Detail special measures proposed to protect adjacent buildings to remain.
- B. Predemolition Photographs: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by demolition operations. Comply with Section 013233 "Construction Photographs." Submit before the Work begins.

1.05 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

1.06 PROJECT CONDITIONS

- A. Owner assumes no responsibility for buildings and structures to be demolished.

1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- B. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Engineer and Owner. Hazardous materials will be removed by Owner under a separate contract.
- C. On-site storage or sale of removed items or materials is not permitted.

1.07 COORDINATION

- A. Arrange demolition schedule so as not to interfere with operations of adjacent occupied buildings.

PART 2 - PRODUCTS

2.01 SOIL MATERIALS

- A. Satisfactory Soils: Comply with requirements in Section 312316.13 - Trenching

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting demolition operations.

3.02 PREPARATION

- A. Existing Utilities: Locate, identify, disconnect, and seal or cap off indicated utilities serving buildings and structures to be demolished.
 1. Arrange to shut off indicated utilities with utility companies.
 2. If removal, relocation, or abandonment of utility services will affect adjacent occupied buildings, then provide temporary utilities that bypass buildings and structures to be demolished and that maintain continuity of service to other buildings and structures.
 3. Cut off pipe or conduit a minimum of 24 inches below grade. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing according to requirements of authorities having jurisdiction.
- B. Do not start demolition work until utility disconnecting and sealing have been completed and verified in writing.
- C. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement or collapse of construction being demolished.
 1. Strengthen or add new supports when required during progress of demolition.

3.03 PROTECTION

- A. Existing Utilities: Maintain utility services to remain and protect from damage during demolition operations.
 1. Do not interrupt existing utilities serving adjacent occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction.
 2. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and authorities having jurisdiction.

- a. Provide at least 3 business days notice to occupants of affected buildings if shutdown of service is required during changeover.
- B. Temporary Protection: Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction and as indicated. Comply with requirements in Section 015000 "Temporary Facilities and Controls."
 1. Protect adjacent buildings and facilities from damage due to demolition activities.
 2. Protect existing site improvements, appurtenances, and landscaping to remain.
 3. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
 4. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 5. Provide protection to ensure safe passage of people around building demolition area and to and from occupied portions of adjacent buildings and structures.
 6. Protect walls, windows, roofs, and other adjacent exterior construction that are to remain and that are exposed to building demolition operations.
 7. Erect and maintain dustproof partitions and temporary enclosures to limit dust, noise, and dirt migration to occupied portions of adjacent buildings.
- C. Remove temporary barriers and protections where hazards no longer exist. Where open excavations or other hazardous conditions remain, leave temporary barriers and protections in place.

3.04 DEMOLITION, GENERAL

- A. General: Demolish indicated structures and site improvements completely. Use methods required to complete the Work within limitations of governing regulations and as follows:
 1. Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire-suppression devices during flame-cutting operations.
 2. Maintain fire watch during and for at least two hours after flame cutting operations.
 3. Maintain adequate ventilation when using cutting torches.
 4. Locate building demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- B. Engineering Surveys: During demolition, perform surveys to detect hazards that may result from building demolition activities.
- C. Site Access and Temporary Controls: Conduct building demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
 2. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations. Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
- D. Explosives: Use of explosives is not permitted.

3.05 DEMOLITION BY MECHANICAL MEANS

- A. Existing Utilities: Demolish existing utilities and below-grade utility structures as indicated on Drawings.

3.06 SITE RESTORATION

- A. Below-Grade Areas: Completely fill below-grade areas and voids resulting from structure demolition operations with satisfactory soil materials according to backfill requirements in Section 312316.13 "Trenching and Backfilling".

3.07 REPAIRS

- A. Promptly repair damage to adjacent buildings caused by demolition operations.

3.08 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Do not burn demolished materials.

3.09 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.
 - 1. Clean roadways of debris caused by debris transport.

END OF SECTION 024116

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, concrete curing, placement procedures, and finishes.

1.02 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, other pozzolans, and silica fume; materials subject to compliance with requirements.
- B. AISC - American Institute of Steel Construction
- C. NRMCA - National Ready Mix Concrete Association

1.03 STANDARDS

- A. Referenced Standards: These standards (latest edition or edition in force by AHJ) form part of this specification only to the extent they are referenced as specification requirements.
 - 1. ACI 117 - "Specification for Tolerances for Concrete Construction and Materials".
 - 2. ACI 301 - "Specifications for Structural Concrete for Buildings".
 - 3. ACI 304 - "Guide for Measuring, Mixing, Transporting, and Placing Concrete".
 - 4. ACI 305R - "Guide to Hot Weather Concreting".
 - 5. ACI 306R - "Guide to Cold Weather Concreting".
 - 6. ACI 308.1 - "Standard Specification for Curing Concrete".
 - 7. ACI 308R - "Guide to External Curing of Concrete".
 - 8. ACI 318 - "Building Code Requirements for Structural Concrete".
 - 9. ACI 347R - "Guide to Formwork for Concrete".
 - 10. ASTM A615 - "Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement".
 - 11. ASTM A775 - "Standard Specification for Epoxy-Coated Steel Reinforcing Bars".
 - 12. ASTM A1064 - "Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete".
 - 13. ASTM C33 - "Standard Specification for Concrete Aggregates".
 - 14. ASTM C40 - "Standard Test Method for Organic Impurities in Fine Aggregates for Concrete".
 - 15. ASTM C94 - "Standard Specification for Ready-Mixed Concrete".
 - 16. ASTM C590 - "Standard Specification for Portland-Limestone Cement".
 - 17. ASTM C260 - "Standard Specification for Air-Entraining Admixtures for Concrete".
 - 18. ASTM C494 - "Standard Specification for Chemical Admixtures for Concrete".
 - 19. ASTM C881 - "Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete".
 - 20. ASTM C1077 - "Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation".
 - 21. ASTM C1602 - "Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete".
 - 22. CRSI63 - "Recommended Practice for Placing Reinforcing Bars".

1.04 ACTION SUBMITTALS

- A. Pursuant to Section 013300 - Submittal Procedures.
- B. Product Data: For each type of product.

- C. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
1. Indicate amounts of mixing water to be withheld for later addition at Project site.
 2. Submit mix designs for each type of concrete to be used on the Project at least 30 calendar days prior to the first scheduled concrete pour. The Contractor's or Concrete supplier's testing laboratory shall develop concrete mix designs and test all materials and mixes for conformance with ACI 301 and these specifications. The costs associated with development of the design mixes and testing of samples shall be included in the bid price.
 3. Submit the following:
 - a. Name, address, and phone number of Contractor's or Ready Mix Supplier's testing laboratory.
 - b. Mix proportions for each different mix design required.
 - c. Source of cement and other proposed cementitious products (if any), type, brand, and certified copies of current mill test reports, including physical and chemical analysis.
 - d. Source of fine aggregates and results of tests made in accordance with ASTM C33 and ASTM C40.
 - e. Source of coarse aggregate and results of tests made in accordance with ASTM C33.
 - f. Catalog cuts of all admixtures.
 - g. Furnish test results for each mix design indicating slump, air-entrainment, water/cement ratio, admixtures included, fresh unit weight, temperature and test results (7, 28, 56 day results). Minimum two tests at each scheduled time period.
 - h. If the concrete is intended to be pumped, design mix accordingly and submit certification it has been tested for pumping.
 4. If adopted mix fails to produce concrete meeting requirements for strength, air content and workability, the Architect may order additional cement or adjustments to mix proportions at no extra cost to the Owner.
- D. Steel Reinforcement Shop Drawings: Placing Drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bend bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
1. Shop drawings shall be at 1/4" per foot scale and shall include elevation views of all walls and piers.
- E. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.
1. Location of construction joints is subject to approval of the Architect.

1.05 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For each of the following, signed by manufacturers:
1. Cementitious materials.
 2. Admixtures.
 3. Form release agents.
 4. Steel reinforcement and accessories.
 5. Curing compounds and membranes.
 6. Floor and slab treatments.
 7. Adhesives.
 8. Semirigid joint filler.
 9. Joint-filer strips.
- B. Welding Certificates

- C. Floor surface flatness and levelness measurements indicating compliance with specified tolerances.
- D. Furnish ready mix delivery slips to the Special Inspector indicating all batches weights, admixtures, water amounts, batch times, start and end discharge times and drum revolutions at mixing speed.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing and delivering ready-mixed concrete products and that complies with ASTM C94 requirements for production facilities and equipment.
 - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities" or a New York State Department of Transportation currently approved plant..
- B. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C1077 and ASTM E329 for testing indicated.
 - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
 - 2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician, Grade I. Testing agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician, Grade II.
- C. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain coarse aggregate from single source, obtain fine aggregate from a single source, and obtain admixtures from single source from single manufacturer. To further insure consistency, coloration, finish and quality; all aggregates, cementitious materials, water and other ingredients shall each be secured from the same source for the duration of the project. All sub-contractors shall utilize the same source and utilize the same mix designs. Multiple suppliers will not be allowed.

1.07 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on concrete mixtures. Tests shall have been conducted within three months of the submission date.

1.08 FIELD CONDITIONS

- A. Cold-Weather Placement: Comply with ACI 306R and as follows: Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
 - 1. When average high and low temperature is expected to fall below 40° F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
 - 2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
 - 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in concrete mix designs.
- B. Hot-Weather Placement: Comply with ACI 305R and as follows:

1. Maintain concrete temperature below 90° F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.

PART 2 PRODUCTS

2.01 CONCRETE, GENERAL

- A. ACI Publications: Comply with the most current editions of the following unless modified by requirements in the Contract Documents:
 1. ACI 301.
 2. ACI 117.

2.02 FORM-FACING MATERIALS

- A. Smooth-formed Finished Concrete: Form-facing panels that provide continuous, true, and smooth concrete surfaces. Furnish in large practicable sizes to minimize number of joints.
 1. Plywood, metal, or other approved panel materials.
 2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
 - a. B-B (Concrete Form), Class 1 or better; mill oiled, and edge sealed.
 3. Overlaid Finnish birch plywood.
- B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
- C. Chamfer Strips: Wood, metal, PVC, or rubber strips, ¾ by ¾ inch, minimum.
- D. Form-Release Agent: Commercially formulated form-release agent that does not bond with, stain, or adversely affect concrete surfaces and does not impair subsequent treatments of concrete surfaces.
 1. Formulate form-release agent with rust inhibitor for steel form-facing materials.
- E. Form ties: Factory-fabricated, removable or snap-off glass-fiber-reinforced plastic or metal form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
 1. Furnish units that leave no corrodible metal closer than 1 inch to the plane of exposed concrete surface.
 2. Furnish ties that, when removed, leave holes no larger than 1 inch in diameter in concrete surface.

2.03 STEEL REINFORCEMENT

- A. Reinforcing Bars:
 1. ASTM A615, Grade 60, deformed.
 2. ASTM A775, Grade 60, deformed, epoxy coated (where specified on Contract Drawings).
- B. Plain-Steel Welded-Wire Reinforcement: ASTM A1064, plain, fabricated from as-drawn steel wire into flat sheets.

2.04 REINFORCEMENT ACCESSORIES

- A. Joint Dowel Bars: ASTM A615, Grade 60, plain-steel bars, cut true to length with ends square and free of burrs.

- B. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire reinforcement in place. Manufacture bar supports from steel wire or plastic according to CRSI's "Manual of Standard Practice," and as follows:
 - 1. For concrete surfaces exposed to view, where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless steel bar supports.

2.05 CONCRETE MATERIALS

- A. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.
- B. Cementitious Materials:
 - 1. Portland Cement: ASTM C595, Type IL (12) (MS) Low Alkali Limestone 12%.
 - a. Fly Ash: ASTM C618, Class F. Use an amount that equals 15 percent of the total cement plus flyash weight.
 - b. Compressive Strength (28 days): 3000 psi
- C. Normal-Weight Coarse Aggregates: ASTM C33, No.57 or 67 coarse aggregate or better, graded. Provide aggregates from a single source.
- D. Normal-Weight Fine Aggregate: ASTM C33, Clean, sharp, natural sand free from loam, clay, lumps or other deleterious substances.
- E. Air-Entraining Admixture: ASTM C260.
- F. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Certified by manufacturer to contain no harmful effects on pex radiant tubing in heated concrete slabs. Do not use calcium chloride or admixtures containing calcium chloride.
 - 1. Water-Reducing Admixture: ASTM C494, Type A.
 - 2. Retarding Admixture: ASTM C494, Type B.
 - 3. Plasticizing and Retarding Admixture: ASTM C1017, Type II.
 - 4. High Range, Water-Reducing Admixture ASTM C494, Type F.
- G. Water: ASTM C 94. Clean and drinkable. Maximum chloride ion content 0.1%.

2.06 CURING MATERIALS

- A. Wet curing blankets for use on concrete flatwork: Polyethylene sheet backed with absorptive fibrous cellulose or other synthetic material.
 - 1. Products:
 - a. PNA Construction Technologies; Hydracure.
 - b. Raven Industries Inc.; Konkure.
 - c. Universal Forrest Products; UltraCure.
- B. Water: Potable.
- C. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C309, Type 1, Class B, dissipating for use on concrete surfaces **other than flatwork**.
 - 1. Products:
 - a. Euclid Chemical Company (The); Kurez DR VOX.

- b. Kaufman Products, Inc.; Thinfilm 420.
- c. Lambert Corporation; Aqua Kure-Clear.

2.07 RELATED MATERIALS

- A. Structural Bonding Agent: ASTM C881, Type II
 - 1. Qualities: Structural bonding adhesive, suitable for adhering freshly-mixed concrete to hardened concrete, moisture tolerant structural epoxy adhesive.
 - 2. Products:
 - a. Sikadur 32 by Sika Corporation.
 - b. Engineer approved equivalent.
- B. Adhesives:
 - 1. Hilti Hit HY 200 Adhesive.
 - 2. Engineer approved equivalent.

2.08 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
 - 1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.
- B. Admixtures: Use admixtures according to manufacturer's written instructions.

2.09 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice".

2.10 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94 and furnish batch ticket information.
 - 1. When air temperature is between 80° and 90° F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90° F, reduce mixing and delivery time to 60 minutes.

PART 3 EXECUTION

3.01 FORMWORK INSTALLATION

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- C. Construct forms tight enough to prevent loss of concrete mortar.
- D. Remove water from forms and excavations and divert water flow to avoid washing over, under or thru freshly placed concrete.
- E. Construct forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast-concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.

1. Install keyways, reglets, recesses, and the like, for easy removal.
 2. Do not use rust-stained steel form-facing material.
- F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- G. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
- H. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- I. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- J. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.
1. Do not apply form release agent where concrete surfaces are to receive special finishes or applied coatings that may be affected by the form release agent.

3.02 STEEL REINFORCEMENT INSTALLATION

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that reduce bond to concrete.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars. Use reinforcing splices at minimum of locations and only at locations of minimum stress. Splice locations shall be approved during shop drawing review phase. Rebar splice lengths shall be in accordance with ACI 318.
- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- E. Install welded-wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.
- F. Take necessary measures to ensure that reinforcement is not disturbed during the placement of radiant tubing and/or during the placement of concrete.

3.03 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Correct alignment and lubrication is essential for proper joint function. Lubricate one-half of dowel length

to prevent concrete bonding to one side of joint. Rotate dowel after concrete placement to loosen bond.

1. Speed Dowel System by Sika Greenstreak, 3400 Tree Court Industrial Blvd., St Louis, MO 63122 Phone: 800-325-9504 is an acceptable alternative to lubricating dowels.

3.04 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Do not add water to concrete during delivery to project site or during placement unless water has been held back from the mix at the batch plant. This amount of water must clearly be shown on the computerized batch ticket. In no case shall the amount of water exceed the amount withheld or the total batch amount in the mix design. Add water on site only in the presence of and with the permission of the Owner's representative. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- C. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
 1. Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints.
 2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
 3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.

3.05 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
 1. Apply to concrete surfaces not exposed to public view.

3.06 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Maintain in moist condition at a relatively constant temperature for a period of time necessary for hydration of cement and attainment of design strength. Comply with ACI 306R for cold-weather protection and ACI 301 and ACI 305R for hot-weather protection during curing.
 1. Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing.
- B. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for remainder of curing period.

- C. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.
- D. Cure concrete according to ACI 308R and ACI 308.1, by one or a combination of the following methods:
 - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12 inch lap over adjacent absorptive covers.
 - d. Curing compound.
 - 2. Wet curing Blanket: Cover concrete slab surfaces in widest practicable width, with sides and ends lapped at least 12 inches. Cure for not less than seven days. Immediately repair any holes or tears during curing period.
 - a. Cure interior slabs only with wet curing blankets.
 - b. Curing compounds may be used at exterior slabs.
 - 3. Curing Compound: Do not use on slabs or other concrete flatwork. Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subject to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.07 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Testing Agency: Engage a qualified testing and inspecting agency to perform test and inspections and to submit reports.
- C. Inspections:
 - 1. Steel reinforcement placement.
 - 2. Headed bolts and studs.
 - 3. Verification of use of required design mixture.
 - 4. Concrete placement, including conveying and depositing.
 - 5. Curing procedures and maintenance of curing temperature.
 - 6. Verification of concrete strength before removal of shores and forms from beams and slabs.
- D. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C172 shall be performed according to the following requirements:
 - 1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. Yd., but less than 25 cu. Yd., plus one set for each additional 50 cu. Yd. or fraction thereof.
 - a. When frequency of testing provides fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 - 2. Slump: ASTM C143; one test at point of placement for each truck delivery and for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change. Test the slump at the delivery truck.
 - 3. Air Content: ASTM C231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's

- pour of each concrete mixture. Test the air content at the point of concrete deposit into the formwork (i.e. at the pump hose discharge).
4. Concrete Temperature: ASTM C1064; one test hourly when air temperature is 40° F and below or 80° F and above, and one test for each composite sample. Test the temperature at the delivery truck.
 5. Compression Test Specimens: ASTM C31.
 - a. Cast and laboratory cure three sets of two standard cylinder specimens for each composite sample. Cast the cylinder specimens with concrete taken at the point of concrete deposit into the formwork (i.e. at the pump hose discharge).
 6. Compressive-Strength Tests: ASTM C39; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days. Reserve one set of two specimens and test at 56 days when concrete fails to meet the design strength at 28 days.
 - a. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
 7. Strength of each concrete mixture will be satisfactory if every average of any three-consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
 8. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7 and 28-day tests.
 9. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42 or by other methods as directed by Architect.
 10. Additional testing and inspection, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
 11. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.
- E. Measure floor and slab flatness and levelness according to ASTM E1155 within 48 hours of finishing.

END OF SECTION 033000

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Excavation for building and tank foundations.
- B. Excavation for slabs-on-grade, paving and landscaping.
- C. Excavation for site structures.
- D. Site excavation.

1.02 RELATED SECTIONS

- A. Section 312200 – Grading.
- B. Section 312316.13 - Trenching
- C. Section 312323.13 – Backfilling
- D. Section 315000 - Excavation Support and Protection

1.03 QUALITY ASSURANCE

- A. Do not excavate wet or frozen materials without written approval from the Engineer.
- B. If excavation exceeds a depth of four feet (1.2 m), place temporary sheeting. Refer to Section 315000.
- C. Provide safety barricades around all open excavations as specified in Division 01 sections.

1.04 FIELD MEASUREMENTS

- A. Verify that survey benchmark and intended elevations for the work are as indicated.

1.05 COORDINATION

- A. Coordinate excavation with installation of sheeting and pile work (if required).

PART 2 - PRODUCTS

2.01 NOT USED

PART 3 - EXECUTION

3.01 PREPARATION

- A. Comply with the requirements contained in Section 312316.13 - Trenching regarding the location, verification, and mapping of underground utilities (pipelines, water, gas, electrical conduit, electricity, etc.) prior to starting any excavation required under this project.
- B. Identify required lines, levels, contours, and datum.
- C. Identify known underground, above ground and aerial utilities. Stake and flag locations.
- D. Notify utility company to remove or relocate utilities, if required.

- E. Protect above and below grade utilities that are to remain.
- F. Protect plant life, lawns and other features remaining as a portion of final landscaping.
- G. Protect benchmarks, existing structures, fences, sidewalks, paving and curbs from excavation equipment and vehicular traffic.
- H. Notify the Engineer prior to commencement of excavation.

3.02 EXCAVATION

- A. Underpin adjacent structures that may be damaged by excavation work, including utilities and pipe chases.
- B. Excavate for structures, building foundations, slabs-on-grade, paving, drainage or sanitary structures, sidewalks, landscaping to the limits as indicated on the plans and extend a sufficient distance from walls, piers, footings and curbs to provide adequate clearances for construction operations, including sheeting and bracing, if required, and for inspection purposes.
- C. Trim approximately the last four (4) inches of excavation subgrade in earth with a smooth edged bucket or by hand just prior to placement of concrete or concrete reinforcement.
- D. Machine slope banks to angle of repose or less, until shored.
- E. Excavation cut not to interfere with normal 45 degree bearing splay of foundations.
- F. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- G. Hand trim excavation. Remove loose matter.
- H. Remove lumped subsoil, boulders, and rock.
- I. Notify Engineer of unexpected subsurface conditions and discontinue affected work in area until notified to resume work.
- J. Stockpile excavated material in area designated on site.
- K. Where existing piping or ductbank cross the new pipeline or structural excavation, they shall be adequately supported and protected from damage due to construction. All methods for supporting and maintaining these facilities shall be subject to approval by the Engineer. Care shall be taken to ensure that the existing pipeline grades and alignment are maintained and that the pipe joints are not disturbed. Backfill shall be carefully placed and tamped to prevent damage or future settlement. Any damage or misalignment of the existing piping due to construction or settlement shall be repaired by the Contractor at his expense.
- L. The Contractor shall perform all excavation required to complete the Work as shown and specified. All material excavated shall be unclassified. Excavations shall include all materials such as earth, sand, clay, gravel, hardpan, boulders, organic materials, decomposed rock, pavements, rubbish and all other materials within the excavation limit.
- M. Excavations shall be open type, shored and braced as shown on the plans and where necessary to prevent injury to workmen and to new and existing structures or pipelines.
- N. Excavations shall be made dry. Stockpile satisfactory excavated materials in areas approved by the Owner, until required for backfill or fill. Place, grade and shape stockpiles for proper drainage.

- O. Dispose of excavated material and waste materials as specified herein.
- P. Pipeline Excavation:
1. No more than 100 feet of trench may be opened in advance of pipe laying.
 2. Trench width shall be minimized to greatest extent practical but shall conform to the following:
 3. Sufficient to provide room for installing, jointing, and inspecting piping, but in no case wider at top of pipe than pipe barrel outside diameter plus 2 feet.
 4. Enlargements at pipe joints may be made if required and approved by the Engineer.
 5. Sufficient for sheeting, bracing, and sloping.
 6. Sufficient to allow thorough compacting of granular embedment adjacent to bottom half of pipe.
 7. Do not use excavating equipment which requires the trench to be excavated to excessive width.
- Q. Structure Excavation:
1. Excavation shall be made to the grades shown on the Drawings and to such widths as will give suitable room for construction of the structures, for bracing and supporting, pumping, and draining. The bottom of the excavations shall be rendered firm and dry and, in all respects, acceptable to the Owner.
 2. Excavation shall be accomplished by methods which minimize disturbance of subgrade soils. For structures having multiple bearing levels or adjacent structures at different levels, excavation and foundation construction shall first be accomplished at the lowest levels to prevent undermining foundations and disturbing adjacent bearing soils at higher levels.
 3. Excavation equipment shall be satisfactory for carrying out the work in accordance with the Specifications. Earth shall not be plowed, scraped, or dug with machines so near to the finished subgrade as to result in excavation of, or disturbance of material below sub grade.
 4. When excavation for foundations has reached final depths, the Owner shall be notified and will inspect conditions. If materials and conditions are not satisfactory to the Owner, the Owner will issue instructions as to the procedures.
 5. For structures that are not pile supported, during final excavation to subgrade level, take precautions required to prevent disturbance of material. Hand excavate the final 6 inches as necessary to obtain a satisfactory undisturbed bottom.
- R. Roadway Excavations:
1. Roadway excavation shall consist of excavation for the roadways in conformity with lines, grades, cross sections, and dimensions shown on the Drawings and shall include the excavation of all unsuitable material from the subgrade.
 2. The subgrade shall be compacted to a 90 percent maximum density.
 3. At road crossings, trenching width shall be minimized by the use of sheeting, trench boxes on similar protection methods.
- S. Unsuitable or Over Excavation:
1. If any over excavation occurs through error of the Contractor or for Contractor's convenience, it shall be refilled at the Contractor's expense with concrete, select fill or other material satisfactory to the Owner.
 2. If the Contractor disturbs the subgrade or otherwise fails or neglects to conduct the excavation work in a manner that provides the surface of the subgrade in proper condition for construction, the Contractor shall remove all disturbed material and replace it with concrete, select fill, or other approved material at his own expense. The condition of the subgrade shall meet with the approval of the Owner before any work is placed thereon.
 3. For structures not pile supported, if, in the opinion of the Owner, the material, in its undisturbed natural condition, at or below the grade of the excavation indicated on the Drawings is unsuitable for foundations, or if organic or silty soil extends below excavation

depth, it shall be removed to such depth and width as the Owner may direct and be replaced with select fill or other suitable material as directed by the Owner.

- T. Where the structure or pipeline is to be placed below the ground water table, well points, cofferdams or other acceptable methods shall be used to permit construction of said structure or pipeline under dry conditions. Dry conditions shall prevail until concrete has reached sufficient strength to withstand earth and hydrostatic loads and until the pipelines are properly jointed, tested and backfilled. In addition, protect excavation from flooding until all walls and floor framing up to and including grade level floors are in place and backfilling has begun. Water level shall be maintained below top of backfill at all times.
- U. Pumping of water from excavations shall be done in such a manner to prevent the carrying away of unsolidified concrete materials, and to prevent damage to the existing subgrade.

3.03 FIELD QUALITY CONTROL

- A. Field inspection will be performed under provisions of Section 014500.
- B. Provide for visual inspection of bearing surfaces.

3.04 PROTECTION

- A. Protect work under provisions of Section 015000.
- B. Protect excavations by methods required to prevent cave-in or loose soil from falling into excavation.
- C. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.

3.05 DISPOSAL OF MATERIALS

- A. All suitable excavated material shall be utilized for backfill and embankment or for Owner selected stockpiling. Stockpile on-site or transport suitable material off site and bring back when conditions allow the stockpiling or filling operations to begin.
- B. All excess suitable excavated material shall become the property of the Contractor and be disposed of by the Contractor in accordance with governing regulations and laws. The cost for hauling and disposal of excess suitable excavated material shall be included in the price as bid.
- C. All unsuitable excavated material that cannot be used for backfill shall become the property of the Contractor and be hauled and disposed of off-site in accordance with governing regulations and laws. The cost for hauling and disposal of unsuitable material shall be included in the price as bid.

3.06 MATERIALS

- A. Remove unsuitable materials in excavations, which are incapable of supporting structures, as determined by an independent soil-testing laboratory, to the extent and depth directed by the Engineer. Refill and compact the excavation with Type C - Sand fill as defined in Section 312323.13.

- B. If required and directed by the Engineer, import Type C - Sand. The trucking and material costs associated with the import of Type C material will be paid for as "Extra Work" in accordance with the provisions contained in the Contract. The equipment cost used to offload and place imported material shall be included in the price as bid. The cost for filling and compacting the imported material shall also be included in the price as bid.

END OF SECTION 312316

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. All below grade piping shall be installed in accordance with work of this Section.
- B. The work of this Section also includes backfilling and compaction requirements, excavation for trenches for below grade piping and utilities.

1.02 RELATED SECTIONS

- A. Section 022100 - Subsurface Investigation
- B. Section 315000 - Excavation Support and Protection
- C. Section 312213 - Rough Grading
- D. Section 312316 - Excavation
- E. Section 312323.13 – Backfilling

1.03 REFERENCES

- A. ANSI/ASTM C136 - Method for Sieve Analysis of Fine and Coarse Aggregates.
- B. ANSI/ASTM D1557 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. (4.54 kg) Rammer and 18-inch (457 mm) Drop.
- C. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

1.04 SUBMITTALS

- A. Sieve analysis for imported bedding material.
- B. Utility mapping drawings.

1.05 QUALITY ASSURANCE

- A. Do not excavate wet or frozen materials without written approval from the Engineer.
- B. Do not backfill over or with wet or frozen materials.
- C. When an excavation exceeds a depth of 4 feet (1.2 m), the Contractor shall place temporary sheeting. Comply with the requirements contained in Section 315000 and all OSHA standards.
- D. Field quality control laboratory tests will be paid for out of the cash allowance for testing services. Coordination with the testing lab shall be the Contractor's responsibility and be included in the price as bid.
- E. Provide safety barricades around open excavations.

1.06 FIELD MEASUREMENTS

- A. Verify that survey benchmark and elevations for the work are as shown on plans.

1.07 COORDINATION

- A. Coordinate all the work under the provisions of Section 013100.
- B. Coordinate and make all arrangements to have the testing laboratory present so that tests can be made. The Engineer may stop trenching operations until such time as the testing laboratory is on-site to make tests or take required samples.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Bedding: Natural river or bank sand; washed; free of silt, clay, loam, friable or soluble materials, or organic matter; graded in accordance with ANSI/ASTM C136; within the following limits:

<u>SIEVE SIZE</u>	<u>PERCENT PASSING</u>
NO. 4 (4.75 MM)	100
NO. 16 (1.18 MM)	10-100
NO. 50 (0.30 MM)	5-90
NO. 100 (0.15 MM)	4-30
NO. 200 (0.075 MM)	0-1

- A. Type A - Gravel Fill: Refer to Section 312323.13 for gradation requirements.
- B. Subsoil: Reused, excavated material, graded, free of lumps, rocks and gravel larger than 3 inches (75 mm) in size, debris and contaminants.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions are suitable for trenching operations to take place in that existing structures, piping, and utilities have been located as not being in conflict with the new work. Refer to paragraph 1.05 herein.
- B. Verify, with the Engineer, that excavated material is acceptable for fill. If directed by the Engineer, send soil samples to the testing laboratory to determine its ability to support intended loads.
- C. Test piping prior to backfilling in accordance with the requirements contained in Section 017550.
- D. Do not backfill any item until the Engineer has fully inspected the work. Expose the work that was not inspected by the Engineer, when so directed by the Engineer.

3.02 PREPARATION

- A. Identify and confirm the location of all underground piping shown on the Contract Drawings prior to excavating for pipe or structures. Dig test holes and employ the underground utility mapping company to determine the existence and location of underground utilities prior to starting any underground work.
- B. Identify required lines, levels, contours, and datum.
- C. Maintain and protect existing utilities remaining which pass through the work area.

- D. Protect plant life, lawns, rock outcropping, and other features remaining as a portion of final landscaping.
- E. Protect benchmarks, existing structures, fences, sidewalks, paving, and curbs from excavation equipment and vehicular traffic. Any item damaged by the Contractor shall be promptly repaired at the Contractor's expense.
- F. Protect above and below grade utilities that are to remain.
- G. Excavate unsuitable material in accordance with the requirements contained in Section 312316 and import suitable material.

3.03 EXCAVATION

- A. Excavate subsoil required for piping.
- B. Excavate trenches to the dimensions shown on the plans, or if not shown, to the dimensions required to properly install the work.
- C. Excavation shall not interfere with normal 45 degree bearing splay of foundations.
- D. Hand trim excavation. Hand trim for bell and spigot pipe joints, if necessary. Remove loose matter.
- E. Remove lumped subsoil, boulders, and rock.
- F. For trenches made in solid rock, excavate to a depth of 1 foot (300 mm) below the proposed pipe invert.
- G. Stockpile excavated material in area designated on site and remove excess as specified in Section 312316.
- H. Install sheeting if trench depth exceeds 4 feet (1.2 m). Refer to Section 315000.

3.04 INSTALLATION - BEDDING

- A. Support pipe and conduit during placement and compaction of bedding fill.
- B. For trenches made in solid rock, place an additional 1-foot (300 mm) of bedding under pipe or conduit.
- C. Place bedding to the dimensions and limits as shown on the plans.
- D. Place bedding material against and to 1 foot (300 mm) over the top of the pipe or conduit in 6 inch (150 mm) compacted layers.
- E. Compact bedding material to 95 percent maximum dry density in accordance with ANSI/ASTM D1557 or ASTM D2922. Maintain optimum moisture content to attain required density.
- F. Place bedding simultaneously on both sides of the pipe or conduit.

3.05 BACKFILLING

- A. Backfill in accordance with Section 312323.13 – Backfilling.

- B. Import suitable material as specified in Section 312323.13 – Backfilling, if directed by the Engineer.

3.06 TOLERANCES

- A. Maximum variation from top surface of backfilling under paved areas: 1/4 inch (13 mm).
- B. Maximum variation from top surface of general backfilling: 1 inch (25 mm).

3.07 FIELD QUALITY CONTROL

- A. Perform testing under provisions of Section 014500.
- B. Perform tests and analysis of fill material will be performed in accordance with ANSI/ASTM D1557 or ASTM D2922.
- C. If tests indicate work does not meet specified requirements, remove work, replace and re- test at no cost to Owner.
- D. Unless additional testing is required by the Engineer, compaction tests shall be taken every 100 feet (30 m), at the springline of the pipe and every 2 vertical feet (610 mm) of backfill.

3.08 3.09 - PROTECTION

- A. Protect finished work under provisions of Section 015000.
- B. Recompect fills subjected to vehicular traffic.

END OF SECTION 312316.13

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Site filling and backfilling.
- B. Fill for over-excavation.
- C. Flowable Fill material for abandoned in place pipelines and structural backfill alternative
- D. Fill under slabs-on-grade and paving.
- E. Consolidation and compaction.
- F. Building perimeter and site structure backfilling to sub-grade elevations.

1.02 RELATED SECTIONS

- A. Section 312200 - Grading
- B. Section 312316 - Excavation
- C. Section 315000 - Excavation Support and Protection

1.03 REFERENCES

- A. ANSI/ASTM C136/136M - Method for Sieve Analysis of Fine and Coarse Aggregates.
- B. ANSI/ASTM D1557 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. (4.54 kg) Rammer and 18-inch (457-mm) Drop.
- C. ASTM D6938 - Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

1.04 SUBMITTALS

- A. Submit the following under provisions of Section 013300:
 - 1. Sieve analysis for each type fill to be used.
 - 2. Compaction reports
 - 3. Flowable Fill Mix Design

1.05 QUALITY ASSURANCE

- A. Do not backfill over or with wet or frozen materials.
- B. Field quality control laboratory tests will be paid for out of the cash allowance for testing services. Coordination with the testing lab shall be the Contractor's responsibility and be included in the price as bid.

1.06 COORDINATION

- A. Coordinate work under provisions of Section 013100.
- B. Coordinate and make all arrangements to have the testing laboratory present so that tests can be made. The Engineer may stop backfilling operations until such time as the testing laboratory is on-site to make tests or take required samples.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Type A - Coarse Stone: Angular, washed natural stone; free of shale, clay, friable material, sand, debris; graded in accordance with ANSI/ASTM C136 within the following limits:

<u>SIEVE SIZE</u>	<u>PERCENT PASSING</u>
2-INCH (50 MM)	100%
1-INCH (25 MM)	95%
3/4-INCH (19 MM)	75 - 90%
5/8-INCH (16 MM)	35 - 60%
3/8-INCH (9.5 MM)	15 - 35%
NO. 4 (4.75 MM)	< 5%

- B. Type C - Sand: (Structural Fill) Natural river or bank sand; washed, free of silt, clay, loam, friable or soluble materials, or organic matter; graded in accordance with ANSI/ASTM C136, within the following limits:

<u>Sieve Size</u>	<u>Percent Passing</u>
No. 4 (4.75 mm)	100
No. 14 (1.18 mm)	10 - 100
No. 50 (0.30 mm)	5 - 90
No. 100 (0.15 mm)	4 - 30
No. 200 (0.075 mm)	0 - 1

- C. Type D - Subsoil: Reused excavated material, graded, free of lumps, rocks and gravel larger than 3 inches (75 mm) in size, debris and contaminants.
- D. Type E - ¾ inch Crushed Blue Stone Surfacing: Angular, washed blue stone; free of shale, clay, friable material, sand, and debris.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions and substrate.
- B. Verify fill materials to be reused are acceptable.
- C. Verify items to be buried during backfilling process have been inspected prior to backfilling.

3.02 PREPARATION

- A. Compact subgrade to 95 percent maximum dry density in accordance with ANSI/ASTM D1557 or ASTM D6938.
- B. Cut out soft areas of subgrade not capable of in situ compaction. Backfill with Type C fill and compact to density equal to or greater than requirements for subsequent backfill material.

3.03 BACKFILLING

- A. Backfill areas to contours and elevations with unfrozen materials.

- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen or spongy materials.
- C. Place and compact materials in continuous layers not exceeding 6 inches (150 mm) compacted density.
- D. All backfilled materials shall be compacted to 95 percent maximum dry density in accordance with ANSI/ASTM D1557 or ASTM D2922. Maintain optimum moisture content to attain required density.
- E. Employ a placement method that does not disturb or damage structures or other items against which material is backfilled.
- F. Backfill only against supported structures. Do not backfill against unsupported structures.
- G. Backfill simultaneously on each side of structure.
- H. Make grade changes gradual. Blend slope into level areas.
- I. Immediately remove surplus materials from the site.
- J. Immediately remove suitable backfill material from the site if stockpiling the material is not possible due to site restraints such as: insufficient area to store the material in a safe and secure manner, stockpiling the material would present interference with the operations of the facility, stockpiling the material hinders the operations of other contractors, stockpiling the material does not comply with the adopted Site Utilization Plan specified to be provided in Section 011400 - Work Restrictions. Truck suitable backfill material back to the site as soon as conditions are amenable to continuing the backfilling operations.
- K. Leave fill material stockpile areas completely free of excess fill materials.
- L. Remove temporary sheeting, as backfilling progresses, under provisions of Section 315000.
- M. Fill excavations as promptly as Work permits, but not until completion of the following:
 - 1. Acceptance by the Engineer of all Work within the excavation.
 - 2. Inspection, testing approval, and recording of locations of underground utilities, connections, branches, structures and other facilities.
 - 3. Removal of temporary shoring and bracing, and backfilling of voids with satisfactory materials.
 - 4. Removal of trash and debris.
 - 5. Excavation shall be kept dry during backfilling operations. Backfills around piping and structures shall be brought up evenly on all sides.
 - 6. General fill and select fill materials shall be placed in layers not exceeding 8 inches in thickness, and each layer shall be compacted as specified below.
 - 7. Backfill in pipe trenches which is below other pipes, structures, foundations, or paved areas shall be select fill and shall be placed in horizontal layers not exceeding 8 inches in depth and thoroughly compacted before the next layer is placed. Compaction layers shall be 8 inches up to the pipe spring line and 12 inches thereafter in trenches that are not below other pipes, structures, foundations, or paved areas.
 - 8. Backfill above and adjacent to pipe, and adjacent to buildings and tank walls shall be compacted by light weight equipment, such as "walk behind" vibratory plate compactors. Heavy self-propelled compactors shall not be used until the following criteria are met:
- N. A minimum of 18 inches of compacted backfill has been placed above the top of the pipe.

- O. Area to be compacted is a minimum distance of 3 pipe diameters away from the adjacent pipe.
- P. Area to be compacted is a minimum of 10 feet from building and tank walls and riser pipes.
 - 1. Levels of backfill against concrete walls shall not differ by more than 2 feet on either side of walls unless walls are adequately braced or all floor framing is in place up to and including grade level slabs. Particular care shall be taken to compact structure backfill that will be beneath pipes, roads, or other surface construction or structures. In addition, wherever a trench passes through structural backfill, the structural backfill shall be placed and compacted to an elevation 12 inches above the top of the pipe before the trench is excavated. Compacted areas, in each case, shall be adequate to support the item to be constructed or placed thereon.
 - 2. Backfill in Pipe Trenches:
 - a. Pipeline trenches may be backfilled prior to pressure testing the pipe, but no structure shall be constructed over any pipeline until it has been tested.
- Q. All pipe larger than 6 inches in diameter shall be placed on existing Sand Stratum 4, Select Fill or granular embedment material. Pipe 6 inches in diameter and smaller shall be placed in granular embedment material unless the trench bottom has been graded to provide uniform and continuous support of the installed pipe.
 - 1. Backfill in Electrical Ductbank Trenches:
 - a. Compacted backfill will be required for the full depth of the trench above the electrical ductbank. Where the trench for one ductbank passes beneath the trench for another pipe or ductbank select backfill shall be placed to the level of the bottom of the upper trench.
 - 2. Crushed Stone Placement:
 - a. Crushed stone shall be placed where shown on the Contract Drawings.
 - b. Crushed stone shall be placed in hand tamped lifts not to exceed 6 inches.
 - 3. Hydro hammers or "jumping jack" hammers shall not be used above pipes until a minimum of 3 feet of backfill has been placed and compacted.
 - 4. Compaction Density Requirements:
 - a. Unless otherwise noted, the degree of compaction required for all types of fills shall be 95 percent in accordance with ASTM D 698. Material shall be moistened or aerated as necessary to provide the moisture content that will facilitate obtaining the specified compaction.
 - b. Drainage stone shall be compacted with a vibratory plate compactor or vibratory rolling compactor. Three complete passes shall be made on each 8-inch thick loose layer of stone. Each pass shall overlap the adjacent previously compacted area a minimum of 20 percent. Density requirement for the drainage stone will be considered satisfactory upon completion of compaction.
 - c. Owner's laboratory will perform tests necessary to provide data for selection and control of fill material placement and water content.
 - d. Owner's laboratory will perform field density tests to insure that the specified density is being obtained during each day of compaction work. Number of tests will be determined by the Engineer.
 - e. If the tests indicate unsatisfactory compaction, the Contractor shall provide the additional compaction necessary to obtain the specified degree of compaction. All additional compaction work shall be performed by the Contractor at no additional cost to the Owner until the specified compaction is obtained. This Work shall include complete removal of unacceptable fill areas and replacement and recompact-ion until acceptable fill is provided, as determined by the Engineer.
 - 5. The Contractor shall repair any damage, at no additional cost to the Owner, after-sett-le-ment that occurs. He shall make all repairs and replacements necessary within 30 days after notice from the Engineer.

3.04 TOLERANCES

- A. Maximum Variation From Top Surface of Backfilling: 1 inch (25 mm).
- B. Maximum Variation From Top Surface of Backfilling Under Paved Areas: 1/4 inch (6 mm) from required elevations.

3.05 FIELD QUALITY CONTROL

- A. Perform testing under provisions of Section 014500.
- B. Perform tests and analysis of fill material in accordance with ANSI/ASTM D1557 or ASTM D2922.
- C. If tests indicate work does not meet specified requirements, remove work, replace and re-test at no cost to Owner.
- D. Compaction tests shall be taken in accordance with Section 014500:
- E. It is the Contractor's responsibility to coordinate the efforts of the testing laboratory and to have a technician present from the laboratory so those tests can be made.

3.06 PROTECTION

- A. Protect finished work under provisions of Section 015000.
- B. Re-compact fills subjected to vehicular traffic.

END OF SECTION 312323.13

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Section includes wood and steel sheeting, sheeting box, and steel H-Section (soldier) piles, and lagging. The method of sheeting shall be at the sole discretion of the Contractor.
- B. The cost to install, remove, and/or leave sheeting in place shall be included in the bid price.
- C. Erosion control methods shall be in place prior to beginning the installation of sheeting.

1.02 RELATED SECTIONS

- A. Section 312316 - Excavation
- B. Section 312316.13 - Trenching
- C. Section 312323.16 - Backfilling

1.03 REFERENCES

- A. Comply with Occupational Safety and Health Standards - Excavations; Final Rule (29 CFR Part 1926) - OSHA Standards.

1.04 SUBMITTALS

- A. Provide details of proposed sheeting for information only.
- B. Design and supporting calculations shall be prepared by or under the supervision of a Professional Engineer licensed in the State of New York. These documents shall bear the seal and signature of the professional engineer.

1.05 QUALITY ASSURANCE

- A. Perform all work of this Section in accordance with OSHA Standards.
- B. The method of excavation support and protection shall be at the sole discretion of the Contractor.
- C. Sheeting shall be installed by persons regularly engaged in sheeting installation and who have a minimum of five (5) years of experience with the type of system being installed.
- D. Sheeting shall be installed under the direct supervision of the professional engineer who designed the sheeting system. This does not require the professional engineer to be present during all phases of its installation, but does require him/her to inspect the work as the work progresses on a part time basis sufficient to adequately certify the system. He/she shall certify, in writing, that sheeting was installed in accordance with the supporting calculations and that the installer complied with recognized procedures, methods, and techniques.
- E. The Engineer shall withhold partial payment for that portion of the sheeting work until the certification has been provided for record purposes only. An amount equal to 15% of the scheduled value will be withheld.

1.06 COORDINATION

- A. Coordinate work under provisions of Section 013100.

- B. Coordinate work with all other Sections requiring temporary sheeting and bracing.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Wood Sheeting: Hardwood species of size and dimensions capable of being driven to the required depths and capable of supporting excavation sides and soil pressures when braced; free from wormholes, wind shakes, loose knots, decayed or unsound portions or defects which would impair its strength or tightness; 3 inches thick minimum.
- B. Commercial stress grades of timber and lumber, with grade descriptions providing material which meet the indicated stress requirements under rules conforming to ASTM D245, shall be acceptable.
- C. Steel Sheeting: Corrugated "Z" shape cross-section; of size and dimensions capable of being driven to the required depths and capable of supporting excavation sides and soil pressures when braced; structurally sound; special shapes for corner construction and transition points.
- D. Sheeting Boxes: Steel, of size and dimensions capable of supporting excavation sides and soil pressures; structurally sound.
- E. Structural Steel: ASTM A36.
- F. Tiebacks: ASTM A722, ASTM A416.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that the installation of the sheeting will not fall within the restricted boundary line as may be delineated on the Contract Drawings.
- B. Verify that the existing soil substrate, site conditions, and elevations are as indicated on the plans.
- C. Verify proposed locations of excavations are as indicated on the plans.

3.02 PREPARATION

- A. Erosion control methods shall be in place prior to beginning the installation of sheeting.
- B. Excavate in accordance with requirements in Section 312316 – Excavation.
- C. Excavate to a depth no greater than 4 feet from existing grade.
- D. Assemble and drive the sheeting in accordance with shop drawings prepared by the Contractor's engineer.
- E. Monitor excavation support and protection systems daily during excavation progress and for as long as excavation remains open. Promptly correct bulges, breakage or other evidence of movement to ensure that systems are stable.
- F. Promptly repair damages to adjacent facilities caused by installing excavation support and protection systems.

3.03 INSTALLATION - SHEETING

- A. Drive sheeting in place to thoroughly support both sides of the excavation using a sheeting hammer. Use a steam or pneumatic hammer for steel sheeting.
- B. Water jetting of sheeting will not be permitted. Do not loosen adjacent ground that might result in collapse.
- C. Install wales and braces or shores tight and in accordance with shop drawings.
- D. Support and protect utilities to remain in place.

3.04 INSTALLATION - SHEETING BOX

- A. Place box in trench utilizing a means that will not damage structural integrity of the box.
- B. Excavate ahead of the sheeting box only enough to advance the sheeting box and only immediately prior to moving the sheeting box.
- C. Backfill on both sides of the sheeting box as it is moved.

3.05 REMOVAL OF SHEETING

- A. Remove sheeting only as backfilling progresses.
- B. Carefully remove sheeting such that compacted backfill is not displaced. Add additional backfill to the areas vacated by the sheeting.
- C. All sheeting shall be removed from the site once its use is no longer required.
- D. The Contractor may request permission to leave sheeting or bracing in place. The Engineer may grant permission on the condition that the cost of sheeting and bracing is borne by the Contractor.
- E. Sheeting to be left in place, where shown on plans, shall be cut and removed to a minimum depth of 5 feet (1.2 m) below finished grade elevation. Where additional depth of sheeting removal is need to facilitate contract work in advance of establishing finished grade, the sheeting will be cut and removed to that required additional depth as approved by the Engineer. Cost of sheeting and bracing to be left in place shall be borne by the Contractor.

END OF SECTION 315000

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work covered by this Section includes the restoration of surfaces damaged or disturbed because of the Contractor's operations and installation of the work.
- B. The Contractor's cost associated with work of this Section shall be included in the unit price items as bid.

1.02 RELATED SECTIONS

- A. Related Sections shall include all applicable technical specification sections.

1.03 QUALITY ASSURANCE

- A. Provide at least one person who shall be present at all times during this portion of Work and who is thoroughly familiar with the types of materials being installed, the best methods for their installation and who shall direct all work performed under this Section.
- B. Grades and surfaces shall be restored so as to be equal to or better than the original conditions which existed at the time they were damaged or disturbed, except as otherwise specified or shown on the Drawings.
- C. Restoration of surfaces under the jurisdiction of public authorities or public utilities shall be in accordance with the requirements of such authorities. Ascertain these requirements, procure necessary permits, arrange for required inspections, and pay all fees, deposits, and other charges that may be required by the authorities.
- D. Existing pavements, curbs, and walks to be restored shall be replaced with new pavement equivalent to or superior to the existing in quality, thickness, bearing capacity and surface finish, except where otherwise specified.
- E. Replaced pavement shall be free from all noticeable sags, settlements, bumps, humps, cracks or other defects. Other than possibly color, the replaced pavement shall be unnoticeable from the existing pavement.

1.04 SUBMITTALS

- A. See Section 013300.
- B. Submittals required are identical to those required under other Sections. If submittals have been made and approved under the other Sections, and is applicable to this Section, then a notification to this effect will be sufficient.
- C. At the completion of the Work under this Section, submit copies of letters of approval from all authorities having jurisdiction over the areas that were restored.

1.05 SCHEDULING

- A. It is the intent of this Section to restore all surfaces as soon as possible to cause the least amount of inconvenience to the Owner and public.
- B. Replace all pavements as specified elsewhere in these specifications.

- C. Replace all items as soon as possible after the installation of the work, with special attention directed at those that control traffic, protect property and lives, create hazards when not in place or are otherwise deemed essential.
- D. The phrase "after installation of the work" means after the installation of the work that necessitated the removal of an item or items.
- E. Scheduling of restoration work shall conform to Section 01140 – Work Restrictions, and the phasing plan set forth therein.

1.06 MAINTENANCE AND GUARANTEE

- A. The maintenance and guarantee requirements of other applicable Sections are required under this Section.
- B. Maintain and care for all restoration work.
- C. Continually maintain all areas where pavement has been removed to provide a smooth, dust-free surface by adding fill and dust control materials and grading daily, or more frequently when required.

PART 2 - PRODUCTS

2.01 REUSE OF EXISTING MATERIALS

- A. Curbs, walks, roads, fences, walls, signs and other items which have been removed, knocked down, or displaced shall be replaced with existing materials when, in the opinion of Engineer, such materials are in acceptable condition. Where such materials have been damaged, marred, broken, or are otherwise in an unacceptable condition, provide replacements of equal or better quality, appearance, size and type, at the Contractor's expense.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Carefully inspect the work installed under other Sections and verify that all such work is complete to the point where restoration of surfaces may properly commence and to insure the unnecessary disturbance of restored surfaces at a later date.
- B. Verify schedule of work for conformance to allowable planting times.
- C. Do not begin restoration work until conditions are satisfactory.

3.02 PLANTS AND REPLANTING

- A. As soon as possible after construction operations have moved to another portion of the site, replant plants, shrubs, trees and other vegetation that was taken up in their original locations, provided that they survived and show indications of continued life.
- B. Replace with the same kind and size, any plantings, trees, shrubs or other vegetation that fail to survive the moving operation.

3.03 GRASS AND LAWNS

- A. Comply with the requirements contained in 329219 – Seeding.

END OF SECTION 320000

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Finish grade subsoil.
- B. Place, level and compact topsoil.

1.02 RELATED SECTIONS

- A. Section 329219 - Seeding.

1.03 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle products to the site under provisions of Section 016500.
- B. Deliver topsoil to the site in uncontaminated containers.
- C. Do not stockpile topsoil over a height of 8 feet.
- D. Cover stockpiled topsoil to protect from precipitation, erosion and contamination.

1.04 ENVIRONMENTAL REQUIREMENTS

- A. Do not place wet or frozen topsoil.
- B. Do not place topsoil on wet or frozen ground or when precipitation is occurring.

1.05 COORDINATION

- A. Coordinate work under provisions of Section 013100.
- B. Coordinate with all adjacent work and work within areas to receive topsoil.
- C. Coordinate the storage of topsoil under provisions of Section 311100 with the placement of topsoil in this section.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Topsoil: Fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, taken from drained site; friable loam; free of subsoil, clay or impurities, plants, weeds, roots, grass, stone and foreign matter; acidity range (pH) of 5.8 to 6.5; containing a minimum of 2.75 percent and a maximum of 25 percent organic matter. Topsoil may be reused from on-site if it meets these requirements.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify existing substrate and conditions.
- B. Verify site conditions and note irregularities affecting work of this section.
- C. Beginning work of this section means acceptance of existing conditions.

3.02 PREPARATION

- A. Prepare subsoil in accordance with Section 312213.
- B. Eliminate uneven areas and low spots. Remove and dispose of debris, roots, branches and stones in excess of 1/2 inch in size. Remove and dispose of subsoil contaminated with petroleum products.
- C. Scarify subsoil to depth of 3 inches where topsoil is scheduled to be placed. Scarify in areas where equipment used for hauling and spreading topsoil has compacted subsoil.

3.03 INSTALLATION

- A. Place topsoil in areas where seeding, sodding or planting is scheduled or where shown on the plans.
- B. Place topsoil to the depths of 4-inches or as indicated on the plans.
- C. Use topsoil in relatively dry state. Place during dry weather.
- D. Fine grade topsoil eliminating rough or low areas. Maintain levels, profiles and contours of subgrade.
- E. Remove and dispose stone, roots, grass, weeds, debris and foreign material while spreading.
- F. Manually spread topsoil around trees, plants and building to prevent damage.
- G. Lightly roll placed topsoil.
- H. Remove surplus subsoil and topsoil from site. Do not remove surplus topsoil from the site prior to obtaining approval of the Engineer.
- I. Leave stockpile area and site clean and raked, ready to receive landscaping.

3.04 TOLERANCES

- A. Maximum Variation from Proposed Elevation: 1/2 inch.

3.05 PROTECTION

- A. Protect finished work under provisions of Section 016500.
- B. Protect landscaping and other features remaining as final work.
- C. Protect existing structures, fences, roads, sidewalks, paving and curbs. Any damage caused by the Contractor to any of these items shall be repaired promptly by the Contractor at no additional cost to the Owner.

END OF SECTION 329119.13

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Seeding.
- B. Mulch, fertilizer and other accessories.
- C. Maintenance.

1.02 REFERENCES

- A. Not Used

1.03 DEFINITIONS

- A. Weeds: Include Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel and Brome Grass.

1.04 SUBMITTALS

- A. Product Data: Provide data on seed mixtures and lime.

1.05 OPERATION AND MAINTENANCE DATA

- A. Maintenance Data: Include maintenance instructions, cutting method and maximum grass height; types, application frequency, and recommended coverage.

1.06 QUALITY ASSURANCE

- A. Seed: Provide seed mixture in containers showing percentage of seed mix, year of production, net weight, date of packaging, and location of packaging.
- B. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; sodium absorption ratio; deleterious material; pH; and mineral and plant-nutrient content of the soil.
 - 1. Testing methods and written recommendations shall comply with USDA's Handbook No. 60.
 - 2. The soil-testing laboratory shall oversee soil sampling, with depth, location, and number of samples to be taken per instructions from Architect. A minimum of three representative samples shall be taken from varied locations for each soil to be used or amended for planting purposes.
 - 3. Report suitability of tested soil for turf growth. Based on the test results, state recommendations for soil treatments and soil amendments to be incorporated. State recommendations in weight per 1000 sq. ft. or volume per cu. yd. for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
 - 4. Report presence of problem salts, minerals, or heavy metals, including aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, and vanadium. If such problem materials are present, provide additional recommendations for corrective action.

1.07 REGULATORY REQUIREMENTS

- A. Comply with applicable regulatory agencies.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect and handle products to site under provisions of Section 016500.
- B. Deliver grass seed mixture in original sealed containers. Seed in damaged packaging is not acceptable.
- C. Deliver materials in waterproof bags showing weight, chemical analysis and name of manufacturer.

1.09 ENVIRONMENTAL REQUIREMENTS

- A. Do not sow immediately following rain, during windy periods or if ground is frozen.
- B. Do not sow when the ambient temperature is expected to drop below 40 degrees F or rise above 90 degrees F during the time in which the seed will establish itself.
- C. Planting Season: April 1st through May 15th or September 1st through October 15th.

1.10 COORDINATION

- A. Coordinate with grading and placement of topsoil.
- B. Coordinate with installation of underground sprinkler system piping and watering heads.

1.11 WARRANTY

- A. Include coverage for one continuous growing season; reseed areas of dead or unhealthy grass at no additional cost to the Owner.

1.12 MAINTENANCE SERVICE

- A. Maintain seeded areas immediately after placement until grass is well established and exhibits a vigorous growing condition, as determined by at least two cuttings, or until the job is accepted by the Owner, whichever occurs last.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Seed: Dry, fresh, re-cleaned seed of the latest crops and of the following proportions:
 - 1. 25% 3rd Millennium FRP Tall Rescue
 - 2. 25% Rhambler SRP Tall Fescue
 - 3. 25% Traverse SRP Tall Fescue
 - 4. 25% Cochise IV Tall Fescue
- B. Topsoil: Fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, taken from drained site; friable loam; free of subsoil, clay or impurities, plants, weeds, roots, grass, stone and foreign matter; acidity range (pH) of 5.8 to 6.5; containing a minimum of 2.75 percent and a maximum of 25 percent organic matter. Topsoil may be reused from on-site if it meets these requirements

2.02 ACCESSORIES

- A. Mulching Material: Hemlock species wood cellulose fiber, dust form, free of growth or germination inhibiting ingredients.
- B. Fertilizer: Not Permitted
- C. Limestone: Ground dolomitic limestone containing a minimum of 90 percent calcium and magnesium carbonates. One hundred percent (100%) shall pass a No. 10 mesh screen and a minimum of 50 percent shall pass a No. 100 mesh screen.
- D. Peat Moss: Shredded, loose, sphagnum moss; free of lumps, roots, inorganic material or acidic materials; minimum of 90 percent organic material measured by oven dry weight; pH range of 4 to 5 percent; moisture content of 30 percent; with moisture absorptive capacity of 450 to 500 percent.
- E. Water: Clean, fresh and free of substances or matter which could inhibit vigorous growth of grass.
- F. Stakes: Softwood lumber, chisel pointed.
- G. String: Inorganic fiber.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify existing substrate and site conditions under provisions of 013100 - PROJECT MANAGEMENT AND COORDINATION.
- B. Verify that prepared soil base is ready to receive the work of this section.
- C. Test soil and lime to a pH of 6.5
- D. Beginning of installation means installer accepts existing conditions.

3.02 PREPARATION

- A. Seed Bed: Scarify soil to a depth of 6 inches in compacted areas. Smooth out unsightly variations, bumps, ridges, and depressions which will hold water. Remove stones, litter, or other objectionable material.
- B. Eliminate uneven areas and low spots. Remove and dispose of debris, roots, branches and stones in excess of 1/2 inch in size. Remove and dispose of subsoil contaminated with petroleum products.
- C. Scarify subsoil to depth of 6 inches where topsoil is scheduled to be placed. Scarify in areas where equipment used for hauling and spreading topsoil has compacted subsoil.
- D. Submit written documentation of soils testing and obtain written approval of seed bed from the District or Architect before commencing seeding operations.

3.03 APPLICATION

- A. Apply seed at a rate of 4 lbs per 1000 sq ft evenly in two intersecting directions. Rake in lightly.

- B. Do not seed areas in excess of that which can be mulched on same day.
- C. Roll seeded area with roller not exceeding 100 lbs per foot of width.
- D. Immediately following seeding and compacting, apply mulch at a rate of 92 lbs per 1,000 square feet. Maintain clear of shrubs and trees.
- E. Apply water with a fine spray immediately after each area has been mulched. Saturate to 4 inches of soil. Discontinue watering if washing begins to occur.
- F. Identify seeded areas with stakes and string around area periphery. Set string height to 24 inches. Space stakes at 8 feet on center.
- G. Cover seeded slopes where grade is 30 percent or greater with erosion fabric. Roll fabric onto slopes without stretching or pulling.
- H. Lay fabric smoothly on surface, bury top end of each section in 6 inch deep excavated topsoil trench. Provide 12 inch overlap of adjacent rolls. Backfill trench and rake smooth, level with adjacent soil.
- I. Secure outside edges and overlaps at 36 inch intervals with stakes.
- J. Lightly dress slopes with topsoil to ensure close contact between fabric and soil.
- K. At sides of ditches, lay fabric laps in direction of water flow. Lap ends and edges minimum 12 inches.

3.04 MAINTENANCE

- A. Maintain grass until job is accepted by the Owner or until the grass exhibits a vigorous growing condition, as determined by at least 2 cuttings, whichever occurs last.
- B. Mow grass at regular intervals to maintain at a maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at any one mowing.
- C. Neatly trim edges and hand clip where necessary.
- D. Immediately remove clippings after mowing and trimming.
- E. Water to prevent grass and soil from drying out.
- F. Immediately reseed areas which show bare spots.

3.05 PROTECTION

- A. Protect seeded areas with warning signs and temporary fencing during maintenance period.

END OF SECTION 329219

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Concrete Manholes.
- B. Cast iron frames and covers
- C. Non-shrink grout
- D. Manhole Accessories

1.02 RELATED SECTIONS

- A. Section 312316 – Excavation
- B. Section 312316.13 - Trenching
- C. Section 312323.13 - Backfilling
- D. Section 315000 - Excavation Support and Protection

1.03 REFERENCES

- A. ASTM C 443 - Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
- B. ASTM C 478 - Specification for Precast Reinforced Concrete Manhole Sections
- C. ASTM C 497 - Test Methods for Concrete Pipe, Manhole Sections, or Tile
- D. ASTM C 877 - Specification for External Sealing Bands for Concrete Pipe, Manholes and Precast Box Sections
- E. ASTM C 923 - Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals
- F. ASTM C 990 - Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
- G. ASTM C 1244 - Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill
- H. AASHTO M 199M/M 199-05 - Precast Reinforced Concrete Manhole Sections
- I. AASHTO T 280 - Concrete Pipe, Manhole Sections, or Tile
- J. ASTM C32 – Sewer and Manhole Brick (Made from Clay or Shale).

1.04 SUBMITTALS

- A. Submit under provisions of Section 013300
- B. Precast Concrete Structures: Indicate structure dimensions, sleeve locations and size, concrete strength and location and size of reinforcement. Submit manhole schedule showing all necessary structure information used to fabricate the unit.
- C. Provide manufacturers data on all materials and manhole accessories including:

1. Manhole Frame and Cover
 - a. General: Loading capability, dimensions, and materials
 - b. Coating: Manufacturer, application procedure, and cure times
 - c. Non-Shrink Grout: Indicate shrinkage and expansion characteristics, strength, setting time, and composition.
 - d. Bentonite Waterstop
 - e. Manhole Steps
 - f. Brick Units
 - g. Mortar
 - h. HDPE Manhole Inserts
2. Submit the following related to design mixes:
 - a. Name, address, and telephone number of Contractor's laboratory.
 - b. Mix proportions.
 - c. Source of cement, type, brand and certified copies of mill reports, including physical and chemical analysis.
 - d. Source of fine aggregates and results of tests made in accordance with ASTM C33 and ASTM C40.
 - e. Source of coarse aggregates and results of tests made in accordance with ASTM C33.
 - f. For each mix proposed, make and cure four (4) standard 6-inch concrete test specimens in the lab in accordance with ASTM C192. Furnish compression test results made in accordance with ASTM C39. Break two (2) cylinders at seven (7) days and two (2) at 28 days.
 - g. If the concrete is intended to be pumped, design mix accordingly and submit certification that it has been tested for pumping.
 - h. The Engineer may approve the use of previously established design mixes if all test results, made within the last six (6) months by a recognized testing laboratory, are positive and provide sufficient evidence of full compliance with this specification. If the Engineer determines that insufficient documentation and test results exist, he may request additional testing or he may request a new design mix with complete test results.
 - i. If the adopted mix fails to produce concrete meeting the requirements for strength and placeability, the Engineer may order additional cement or adjustments to mix proportions.
3. Provide manufacturer certification that manholes meet all requirements of Riverhead Sewer District specifications.

1.05 QUALITY ASSURANCE

- A. Notify Engineer at least 48 hours before pouring precast concrete sections.
- B. Mark precast concrete structures in accordance with ASTM C478.
- C. Age precast concrete structures at least two weeks before shipment.
- D. Testing and analysis of concrete shall be performed under the requirements in Section 014500.
- E. The testing laboratory shall take cylinders and perform slump and air entrainment tests in accordance with ACI 301 and Section 014500.

1.06 COORDINATION

- A. Coordinate placement of sleeves for penetrations.
- B. Coordinate with piping installation.

- C. Coordinate rim elevations with proposed elevations.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Do not excavate or backfill during inclement weather or when precipitation is occurring.
- B. Do not backfill over or with wet or frozen materials.
- C. Do not backfill over or with frozen materials

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Old Castle
- B. Long Island Precast, Inc.
- C. Coastal Pipeline Products Corp.

2.02 CONCRETE MANHOLES

- A. Standard Manhole Frame and Cover: ASTM A-48 Class 35B cast iron construction, manufactured by Campbell Foundry Company, East Jordan Iron Works, or approved equal, with date of cast on underside of cover, "SEWER" inscription on cover, painted with one coat asphaltum. Pattern No. 1041-195. Frame and cover shall be manufactured in the U.S.A. AASHTO M306 rated.
- B. Manhole: ASTM C478 reinforced precast concrete tongue and groove joint, rectangular shaped, conforming to AASHTO H-20 loading; of the following materials:
- C. Non-Shrink Grout:
 - 1. Cement-Based Grout: Premeasured and prepackaged materials supplied by the manufacturer, requiring only the addition of water. The manufacturer's instructions must be printed on the outside of each bag.
 - 2. Water: ASTM C94/C94M, clean and not detrimental to concrete
 - 3. Use the minimum water necessary for proper installation.
 - 4. Grout Characteristics:
 - a. Non-Shrink: No shrinkage (0.0%) and a maximum 4.0% expansion when tested in accordance with ASTM C-827. No shrinkage (0.0%) and a maximum of 0.2% expansion in the hardened state when tested in accordance with CRD-C-621.
 - b. Compressive Strength: A minimum 28-day compressive strength of 5,000 psi when tested in accordance with ASTM C-109.
 - c. Setting Time: A minimum initial set time of 60 minutes when tested in accordance with ASTM C-191.
 - d. Composition: Shall not contain metallic particles such as aluminum powders, iron filings, or expansive cement.
 - 5. Manhole Channels and Benches: Factory or field formed from concrete. Portland cement design mix, 4000 psi (27.6 MPa) minimum, with 0.45 maximum water/cementitious materials ratio. Dirt, brick, or other loose material shall not be used to form the invert.
 - a. Channels: Concrete invert, formed to same width as connected piping, with height of vertical sides to three-fourths of pipe diameter. Form curved channels with smooth, uniform radius and slope.
 - 1) Minimum Invert Slope: 1.2-inch drop, or as indicated on plans.
 - 2) Minimum Concrete Thickness: ASTM C478, 2 inches

- b. Benches: Concrete, sloped to drain into channel.
 - 1) Minimum Slope: 0.5 inch per foot.
 - 2) Maximum Slope: 1.5 inch per foot.
- 6. Manhole Steps: Copolymer polypropylene plastic steel rein-forced manhole steps, M.A. INDUSTRIES, Model PS2-PF, set into manhole wall.
- 7. Precast Reinforced Concrete Manhole Sections: ASTM C478, rectangular shape.
- 8. Brick Units for Collar: ASTM C32, Grade MS, solid, shale red brick - moisture-controlled, normal weight.
- 9. Brick Units in Flow Channel: ASTM C32, Grade SM, solid, shale red brick - moisture-controlled, normal weight.
- 10. Mortar: ASTM C270, Type M, consisting of a of a 1:1:5 ratio of portland cement, masonry cement, and well graded masonry sand, respectively.
 - a. Portland Cement: ASTM C150, Type II
 - b. Masonry Cement: ASTM C270, Type M
 - c. Sand: ASTM C144
 - d. Water: ASTM C94/C94M, clean and not detrimental to concrete.
- 11. Sewer Plug: Cherne T-Handle Gripper Plug or Engineer approved equal.

2.03 ACCESSORIES

- A. Pipe Connectors: Elastomeric PVC in accordance with ASTM D5926 and ASTM C1173 with Series 300 stainless steel bands by FERNCO, Davison, MI or approved equal, Model Strong Back RC 5000.
- B. Flexible Pipe to Manhole Connector: NPC, INC. KOR-N-SEAL I which meets or exceeds the requirements of ASTM C923. Installation band to secure to opening in manhole wall and pipe clamp shall be Series 304 stainless steel. Connector to be toggle style, wedge style not acceptable.
- C. Precast Joint Gaskets: ASTM C990/Federal Spec New York-S-00210 - Self-sealing butyl gasket by ConSeal or approved equal, Model CS-202
- D. HDPE Manhole Inserts: ASTM D1248, Class A, Category 5, Type 111, Strong and Durable Manhole Inflow Protector Dish by S.S.I. Sealing Systems, Inc. or approved equal.

PART 3 - EXECUTION

3.01 ERECTION OF CONCRETE STRUCTURES

- A. Determine required inside diameter of each wall opening, in accordance with manufacturer's recommendation, to assure a water-tight joint, for openings which accommodate penetration seals.
- B. Place concrete in accordance with ACI 304.
- C. Fabricate concrete reinforcing in accordance with CRSI 63.
- D. Ensure reinforcement, sleeves and embedded parts are not disturbed during concrete placement.
- E. Provide continuous flexible bentonite waterstop at tongue and groove joints. Install waterstop in accordance with manufacturer's installation instructions.
- F. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures and mechanical injury.

3.02 EXAMINATION

- A. Verify that excavation is ready to receive work and excavations, dimensions and elevations are as indicated on drawings.

3.03 PREPARATION

- A. Hand trim excavations to required elevations. Correct over excavation with Type C fill, as defined in Section 312323.13.
- B. Remove large stones or other hard matter which could damage pipe or impede consistent backfilling or compaction.

3.04 INSTALLATION

- A. Form bottom of excavation clean and smooth to correct elevation.
- B. Install precast concrete base, shaft and slab top plumb and level.
- C. Establish elevations and pipe inverts for inlets and outlets as indicated.
- D. Adjust lock joint flexible sleeve and install non-shrink grout to provide water-tight pipe penetration.
- E. Install precast concrete base, shaft, and slab top of precast plumb and level. Establish elevations and pipe inverts for inlets and outlets as indicated. Locate manhole rungs as directed by the Engineer relative to the top slab opening.
- F. Provide concrete bench in base of all manholes accepting gravity sewer flow.

3.05 MASONRY INSTALLATION

- A. Brick: Drenched with water just before laying.
 - 1. Joints: Filled between bricks completely with mortar.
 - a. Form bed joints with thick layer of mortar, smoothed.
 - b. Buttering at corners of brick and then throwing mortar or scrapings into empty will joints will not be permitted.
 - 2. Brick Placement:
 - a. Place brickwork in common bond.
 - b. Place brick carefully without disturbing brick previously placed
 - c. Dry or butt joints will not be permitted.
 - d. Grout where indicated.

3.06 SITE TOLERANCES

- A. Maximum variation from proposed top of structure elevation: 1/4 inch.

3.07 FIELD QUALITY CONTROL

- A. Perform field inspection and testing under Section 014500.
- B. Request inspection prior to and immediately after placing backfill.
- C. Perform compaction testing in accordance with ASTM D2922 and Section 014500.

1. If tests indicate Work does not meet specified requirements, remove work, replace and retest at no cost to Owner.

3.08 PROTECTION

- A. Protect structures and appurtenances from damage or displacement until Project is accepted by Owner.

END OF SECTION 330561

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section includes the following:
 - 1. Pipe and fittings for gravity sanitary sewers and gravity drain lines
 - 2. Comply with the requirements contained in Section 013223 - Surveying for requirements pertaining to the submission of underground pipeline documentation that shall be provided as work of this section.
- B. All products furnished under this section shall be made in the United States.

1.02 RELATED SECTIONS

- A. Section 312316 - Excavation
- B. Section 312316.13 - Trenching
- C. Section 312323.13 - Backfilling
- D. Section 315000 - Excavation Support and Protection
- E. Section 320000 - Restoration of Surfaces

1.03 REFERENCES

- A. ACI 304 - Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete.
- B. ANSI/AWWA C110 - Ductile-Iron and Gray-Iron Fittings, 3 in. through 48 in., for Water and Other Liquids.
- C. ACI 308 - Standard Practice for Curing Concrete.
- D. ANSI/AWWA C150/A21.50 - American National Standard for Thickness Design of Ductile Iron Pipe.
- E. ASTM A1064 - Standard Specification for Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
- F. ANSI/AWWA C111/A21.11 - Rubber-Gasket Joints for Ductile Iron Pressure Pipe and Fittings
- G. ANSI/AWWA C600- Installation of Ductile Iron Water Mains and Appurtenances.
- H. ANSI B18.2.1 - Square and Hex Bolts and Screws Inch Series Including Hex Cap Screws and Lag Screws.
- I. ANSI B18.2.2 - Square and Hex Nuts (Inch Series).
- J. ASTM A307 - Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
- K. ASTM F-714, ASTM D-3261, ASTM D3350 for High Molecular Weight, High Density PE 3408 Polyethylene Pipe
- L. ASTM C191 - Test Method for Time of Setting of Hydraulic Cement by Vicat Needle.
- M. ASTM C827 - Test Method for Early Volume Changes of Cementitious Mixtures.

- N. ASTM C923 - Resilient Connectors between Reinforced Concrete Manhole Structures and Pipe.
- O. ASTM D2321 - Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe.
- P. ANSI/ASTM D698 - Test Methods for Moisture - Density Relations of Soils and Soil Aggregate Mixtures. Using 5.5 lb. rammer and 12-inch drop.
- Q. ASTM D3034 - Type PDM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings.
- R. CRSI 63 - Recommended Practice for Placing Reinforcing Bars.
- S. Great Lakes-Upper Mississippi River Board of State Sanitary Engineers - Recommended Standards for Sewage Works (Ten State Standards).
- T. UNI-B-5-89 - Recommended Practice for the Installation of Polyvinyl Chloride Sewer Pipe.

1.04 SUBMITTALS

- A. Submit under provisions of Section 013300.
 - 1. Submit underground pipeline documentation as required in Section 017839.
 - 2. Product Data: Provide data on pipe materials, pipe fittings, accessories and marking tape.
 - 3. Manufacturer's Installation Instructions: Indicate procedures required to install products specified.
 - 4. Manufacturers' Certificate: Certify that products meet or exceed specified requirements.
- B. CERTIFICATION: One (1) per pipe size per 2,000 linear feet of pipe.
- C. MANUFACTURERS' RECORDS & TESTS: Written Transcripts Of The Test Results Shall Be Delivered Directly To The Engineer Within One Week Of The Shipment Of Pipe With The Date Of The Tests As Close To The Date Of Manufacture As Practical. For Pressure Rated PVC Pipe, Written Transcripts Shall Be Furnished Directly To The Engineer In Accordance With The Applicable Sections Of AWWA C900:
 - 1. Quality Control Records: Section 5.2
 - 2. Sustained Pressure: Section 5.1.3
 - 3. Burst Strength: Section 5.1.4
 - 4. Flattening: Section 5.1.6
 - 5. Extrusion Quality: Section 5.1.7
 - 6. Hydrostatic Test: Section 5.1.12

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with Riverhead Sewer District and Ten State Standards
- B. PVC pipe shall be marked with the following:
 - 1. Nominal size in inches and O.D, base
 - 2. PVC
 - 3. Dimension Ratio (i.e. DR 18)
 - 4. Pressure Class in PSI
 - 5. Hydrostatic integrity test pressure
 - 6. AWWA designation
 - 7. Manufacturer's name/trademark and production run record/lot code
 - 8. Mark of certifying agency for pipe intended for potable use
 - 9. Maximum allowable axial joint deflection in degrees

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store, protect, and handle products in accordance with manufacturer's instructions to prevent soiling, disfigurement, or damage.
- B. Protect piping systems from entry of foreign materials by temporary covers, completing sections of work and isolating parts of completed systems.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Do not install underground piping when bedding is wet or frozen.
- B. Do not mix or place mortar and non-shrink grout if ambient temperature is below 40 degrees F.
- C. Do not backfill over or with frozen materials.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. PVC PIPE: Certainteed, JM, Carlon

2.02 MATERIALS

- A. Sewer Pipe:
 - 1. Ductile Iron - Pipe shall be centrifugally cast with primary graphite in modular form or spherulitic and conform to AWWA C150, Class 52, bell and spigot ends. All buried and exposed pipe and fittings shall be cement lined per AWWA C104, double thickness, minimum 3/16 inch for pipe and standard thickness for fittings. All buried pipe and fittings shall be provided with bituminous seal coat per AWWA C106, inside and out. Ductile iron fittings shall comply with AWWA C110. Nuts and bolts shall be alloy steel conforming to the physical properties of ASTM A563 and ANSI B18.2.1 for bolts and ANSI B18.2.2 for nuts. Joints meet or exceed AWWA C111.
 - a. For all sewer lateral pipe past (past tee/wye or saddle tap fitting) provide PVC - ANSI/ASTMD3034, Type PSM, Polyvinyl Chloride (PVC) material; inside nominal diameter as indicated, integral bell and spigot end joints, Class DR 18 or as indicated on plans.

2.03 ACCESSORIES

- A. Pipe Connectors: Plain Rubber (Styrene Butadiene Copolymer). As manufactured by US Pipe, or equal.
- B. Gaskets: Plain Rubber (Styrene Butadiene Copolymer) with stainless steel locking segments for push-on joint restraint. Field Lok 350 by US Pipe, or Amarillo Fast-Grip by American.
- C. Detectable Marking Tape: Solid plastic tape with a minimum total thickness of 4.5-mil with aluminum backing. Tape resistant to alkalis, acids, and other destructive elements. Green in color, minimum 3 inches wide with the words "Caution - Sanitary Sewer" repeated every 16-36 inches, conforming to APWA uniform color code.
- D. Flexible Couplings: Elastomeric PVC in accordance with ASTM D5926 and ASTM C1173 with shear bands and Series 300 stainless steel bands by FERNCO, Davison, MI.

- E. Saddle Taps: ASTM A48, Class 30 Cast Iron, ASTM C361 O-ring and stainless straps and fasteners as manufactured by The General Engineering Company, Type 8C Mondel I Sealtite Tea, or approved equal.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that excavations are to required grade, dry and not over excavated. Comply with the requirements contained in Section 312316.13 - Trenching and Section 312323.13 - Backfilling.

3.02 PREPARATION

- A. Remove scale and dirt, on inside and outside, before assembly.
- B. Remove large stones or other hard matter that could damage pipe or impede consistent backfilling or compaction.
- C. All encountered obstructions in the line of the work shall be carefully taken-up and stored for subsequent replacement. If damaged, full and new replacement will be required at no additional expense to the Owner. Comply with Section 320000 - Restoration of Surfaces.
- D. Remove and dispose of all other obstructions which will affect the work or which are specifically designated to be removed.
- E. Hand trim excavations to required elevations. Correct over excavation with Type C fill as defined in Section 312316 - Excavation.

3.03 INSTALLATION

- A. Maintain separation of sanitary sewer from water piping in accordance with regulations of Suffolk County Department of Health Services, New York State Department of Environmental Conservation, and the Recommended Standards for Wastewater Facilities.
- B. Parallel Water and Sewer Lines - Pipelines carrying sewage, sludge or other wastewater, whether treated or not, shall not be located any closer than 10 feet horizontally from a potable water pipeline. If it is not possible to maintain horizontal separation, the lines may be located at least 3 feet horizontally from each other, provided that there is at least 18 inches of clear vertical separation, with the sewer line being below the water line.
- C. Water and Sewer Line Crossings - Whenever water and sewer lines must cross, the sewer must be situated below the water line with at least an 18 inches of clear vertical separation. In no case shall a water line pass under a sewer.
- D. Special Conditions - Parallel Lines - When it is impossible to achieve the requirements of paragraph 3.03 (B), immediately notify Engineer. If Engineer concurs, he will order the construction of the sewer with ductile mechanical joint pipe and may order the reconstruction of the existing water line. Regardless, sewer shall be installed at a lower elevation than the water line and the reconstructed water line shall be pressure tested for leakage in accordance with Section 017550 - Process Pipe and Tank Testing.
- E. Special Conditions - Crossing Lines - When it is impossible to achieve the requirements of paragraph 3.03 (C), immediately notify Engineer. If Engineer concurs; he will order 1) the water pipe raised, 2) the construction of the sewer line with ductile mechanical joint pipe. Regardless, the sewer shall be installed at a lower elevation than the water line. The full length of sewer

pipe shall be centered under the crossing line. The joint shall not be closer than 9.5 ft. to the crossing.

- F. Unusual Conditions - Immediately notify Engineer when it is impossible to achieve any of the above conditions. The Engineer will prescribe the procedures to be followed.
- G. Install plastic pipe, fittings, and accessories in accordance with ASTM D2321 and manufacturer's instructions. Seal joints watertight. Select pipe and fittings so that there will be as small a deviation as possible at the joints and so those inverts present a smooth surface. Pipe and fittings that do not fit together to form a tight fitting joint are not permitted.
- H. Install ductile iron pipe in accordance with AWWA and ANSI standards and manufacturer's instructions. Seal joints watertight. Select pipe and fittings so that there will be as small a deviation as possible at the joints and so those inverts present a smooth surface. Pipe and fittings that do not fit together to form a tight fitting joint are not permitted.
- I. Install pipe to allow for expansion and contraction without stressing pipe or joints.
- J. Lay pipe to slope gradients noted on drawings with maximum variation from the slope of 1/8 inch in 10 feet.
- K. Backfill and compact trench in accordance with Division 31 requirements.
- L. Plug or close every open pipe end before leaving work at night, and when pipe installation is not in progress.
- M. After partially backfilling, install marking tape 18 to 24 inches above crown of pipe. Place as straight as possible. Hold tape in position by adding backfill with hand shovels before using mechanical equipment to finish the backfill.
- N. Adjust lock joint flexible sleeve or install non-shrink grout to provide water-tight pipe penetration. Mount lid and frame level in grout, secured to top section to elevation indicated.
- O. Perform all mixing, surface preparation and grouting in accordance with manufacturer's recommendations.
- P. In each stretch of underground pipe, light shall be visible from one end to the other and the pipe shall be true to line and grade. All deposits found in the pipes, protruding cement or packing shall be removed and the sewer bore left clean and free through its entire length. There shall be no visible leakage into any stretch of sewer. All manholes and other appurtenance shall be of the specified size and form and of neat appearance, and their tops shall be set to the proper grade. If the Work is found to be in any condition other than in accordance with these specifications, it shall be brought to proper condition by cleaning, pointing, or if necessary, excavating and rebuilding.
- Q. Install pipes to the lines and grades as given on the drawings. Engineer reserves the right to disapprove a method of control, including those previously accepted, if, in the Engineer's opinion, the method of control is not providing the accuracy required under the Contract.
- R. Drainage of construction excavations through sanitary sewers is not permitted.
- S. Maintain the excavation free of water during the progress of the Work. No pipe shall be laid in water nor shall there be any joints made up in water. No separate allowance for pumping or otherwise removing water will be made. All slides or cave-ins of the trenches or cuts shall be remedied at the expense of the Contractor, and to the satisfaction of the Engineer.

- T. Make connections between pipes of different materials with approved adapters. The encasement of adapter made connections with concrete is not permitted. Commence pipe laying at the lowest point, with the spigot ends pointing in the direction of flow.
- U. All adjustments to the line and grade of pipe laid on earth foundation shall be done by scraping away or filling in the earth under the barrel of the pipe, and not be blocking or wedging. Where excavation has been carried too deep but not in excess of six (6) inches, the Contractor may replace with suitable earth and hand tamp same to provide a firm foundation. Wherever the contractor has excavated to a depth in excess of six (6) inches, the Engineer may order broken stone or gravel fill without additional compensation to the Contractor. In all cases the trench under the joint shall be excavated to permit an even bearing for the barrel of the pipe.
- V. When unsuitable materials and/or conditions are encountered, the Engineer may direct the excavation to continue below grade and the trench filled with gravel or crushed stone foundation, or the Engineer may order other corrective measures.
- W. Where required, holes and spaces to be used for joints shall be sufficiently large enough to leave the joint of each pipe free and not resting on the ground at any point. Every joint shall be made up in the trench.

3.04 PIPE INSTALLATION

- A. Excavate and shape the trench to conform to the details shown on the Drawings. If accidental or intentional over excavation of the trench occurs, in depth or width, corrective measures shall be taken by the Contractor. No additional compensation will be made therefore. This requirement applies equally in the case of cave-in of the trench walls, by failure to apply necessary sheeting measures.
- B. Place and compact embedment materials in accordance with Paragraph 5.10.2, "Methods of Placing Embedment Materials", of Recommended Standard UNI-B-5 of the Uni-Bell Plastic Pipe Association, subject to the conditions of the Plans and these Specifications. Pipe haunching and initial backfill shall be brought up and compacted equally on either side of the pipe, to preclude disturbance of the pipe, in layers not to exceed four inches in height, by use of hand tamping supplemented by mechanical compacting using hand-operated compactors, similar to "Whacker" or equal. Flooding, puddling and jetting of initial backfill are prohibited for PVC pipe installations.
- C. Place final backfill in accordance with Section 312323.13, as modified herein. "Hydrohammers" and similar compacting equipment, which, in the opinion of the Engineer, may cause disturbance to the pipe and/or the materials in the pipe zone (bedding, haunching, and initial backfill) shall not be utilized within four feet (4') of the pipe. This shall not be construed to preclude the use of mechanical compactors, "hoe-packers", and the like, which may be demonstrated, by the Contractor, to produce no deleterious effects on the embedment materials. Such demonstration shall be the responsibility of the Contractor. The use of mechanical compaction equipment shall be in accordance with the pipe manufacturer's recommendations, and as approved by the Engineer.
- D. The Contractor's specific attention is directed towards the critical nature of effecting and maintaining the specified compaction of the embedment materials in the pipe zone. Lower limit for sheeting driven and pulled shall be one foot (1') above the top of the pipe. All sheeting placed below this level shall be cut off at said point and left in place. Compensation therefore will be made only if ordered to drive below this level, by the Engineer.
- E. Use of a moveable "trench box" when moved, may cause disturbance to the materials in the pipe zone. Usage of a trench box, for protection of personnel in accordance with OSHA

requirements, will be permitted only under one of the following conditions, which shall be the Contractor's responsibility to propose and employ:

1. Position the moveable trench box on a shelf above the pipe springline, with the pipe installed in a narrow, vertical walled subditch. The width of the subditch shall not exceed the O.D. of the pipe plus 9 inches on each side; or
 2. Increase the overall trench width to produce a minimum clearance of 2-1/2 pipe diameters between the pipe barrel and the trench box on each side of the pipe after embedment has been placed and compacted. In utilizing this option, all voids left in the embedment material as the result of trench box removal shall be filled and compacted. Disturbance to the loss of compaction density in the pipe zones is not permitted.
 3. Submit proposed method of meeting the above-specified conditions to the Engineer. No additional compensation will be made for meeting these conditions, or for additional excavation, backfill, repaving, or similar items.
- F. Compaction of embedment materials, including bedding, haunching, and initial backfill shall be as shown on the Drawings, and initial backfill shall be as shown on the Drawings, but in no case shall the density attained be less than that required for the final backfill above. The Contractor's attention is directed toward compaction requirements for pavement sub-base material, specified elsewhere in the specifications.

3.05 MECHANICAL JOINT PIPE/FITTING INSTALLATION

- A. Clean the socket and plain end. All surfaces with which the gasket comes in contact shall be thoroughly wire brushed just prior to assembly. All loose rust, mud, frozen material, sand, gravel, and other foreign material shall be removed.
- B. Wipe the gasket clean and install the gasket. Take care that no gasket loops or bulges protrude into the path of the entering pipe spigot. In temperatures below 32 deg. F, the gaskets shall be warmed before installation.
- C. Using a clean brush, apply a liberal amount of lubricant supplied by the pipe manufacturer completely over the end of the pipe, the spigot radius, and the outer surface of the pipe up to the assembly stripe. Lubricant shall have no deteriorating effects on gasket and pipe material. Also, apply lubricant completely over the exposed surface of the gasket.
- D. Install the bevel end of the pipe into the socket. Take care that the plain end is centrally located in the socket and push the pipe home. The joint deflection may then be set.
- E. When tightening bolts on mechanical joint fittings, the gland shall be brought up to the fitting flange evenly, maintaining approximately the same distance between the gland and the face of the flange at all points around. This shall be done by partially tightening the bottom bolt first, then the top bolt, next the bolts at either side, and then the remaining bolts. Repeat this process until the proper joint tightness is achieved. Overstressing the bolts to compensate for the poor installation will not be permitted.

3.06 CONNECTIONS TO EXISTING MANHOLES AND STRUCTURES

- A. The use of excessive force or blunt instruments is prohibited in installing the pipe into the walls of existing manholes and structures. Neatly core drill a hole through the existing wall, to achieve the minimum diameter hole required to install the pipe true to line and grade. The structure shall be maintained in good repair. Provide flexible and watertight connection at the wall.
- B. In making the connection to an existing manhole or structure, pump out each structure in order to make this connection.

- C. Where drop inlets are required for connections to existing manholes, install in accordance with the details and configurations indicated in the Contract Documents.

3.07 DEFLECTION TESTING

- A. The total vertical wall deflection shall not exceed four percent (4%) of the inside pipe diameter. The deflection shall be checked no earlier than 30 days after placement and compaction of the final backfill by manually pulling a go, no go deflection testing mandrel through the pipe. If the percent of deflection exceeds the maximum specified, undertake such remedial action as required to reduce the deflection to the limits specified. Vertical deflection tests shall be performed on all lines. Furnish all test equipment and labor for conducting the tests.
- B. Arrange for the testing to be observed by the Engineer.

3.08 EXFILTRATION TESTING

- A. Test each section of pipe between manholes individually. Continuous sections shall not be tested simultaneously.
- B. The minimum positive head of water for exfiltration testing shall be two feet above the exterior crown of the pipe at the highest point of the line under test, or two feet above the groundwater level when groundwater levels are above the exterior crown of the pipe. Immediately upon completion of the test, remove the downstream plug in the presence of the Engineer, to verify that all test water flows freely from the pipe and upstream manhole under test.
- C. The maximum allowable quantity of exfiltration shall be as specified in Section 017550. There will be no separate exfiltration allowance for manholes, except that their width will not be deducted from the length of pipe used in computing the total allowable leakage for the section under test. Allow testing to be observed by the Engineer.

3.09 SITE TOLERANCES

- A. Maximum variation from proposed rim elevation shall be 1/4 inch.
- B. Maximum variation from established pipe grade shall not exceed the following, given that such variance does not result in a slope less than the minimum slope identified in 10 State Standards.

Diameter (Inches)	Tolerance (Feet)
8 – 12	0.03
14 – 16	0.04
Greater to or equal to 18	0.05

3.10 FIELD QUALITY CONTROL

- A. Request inspection prior to and immediately after placing backfill.
- B. Compaction testing shall be performed in accordance with ASTM D2922.

- C. If tests indicate work does not meet specified requirements, remove work, replace, and retest at no cost to Owner.

3.11 PROTECTION

- A. Protect pipes, structures, and appurtenances from damage or displacement during backfilling.

END OF SECTION 333111