

**SPECIFICATIONS
AND CONTRACT DOCUMENTS
FOR THE
BELLAIR DRIVE
DRAINAGE IMPROVEMENTS**



**VILLAGE OF DOBBS FERRY
WESTCHESTER COUNTY
NEW YORK
OCTOBER 2022**

**AI ENGINEERS, INC.,
DOLPH ROTFELD ENGINEERING DIVISION
570 TAXTER ROAD
ELMSFORD, NEW YORK 10523**

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SECTION A
NOTICE TO BIDDERS

VILLAGE OF DOBBS FERRY

MAYOR

Vincent Rossillo

Deputy Mayor

Donna Cassell

112 Main Street, Dobbs Ferry, N.Y. 10522

(914)231-8500 Fax (914) 231-3470

www.dobbsferry.com

VILLAGE ADMINISTRATOR

Melissa Ferraro

TRUSTEES

Michael Patino

Shari Rosen Ascher

Matt Rosenberg

Nicole Sullivan

Larry Taylor

VILLAGE ENGINEER

AI Engineers, Inc.,

Dolph Rotfeld Engineering Division

570 Taxter Road

Elmsford, NY 10523

NOTICE TO BIDDERS
BELLAIR DRIVE DRAINAGE IMPROVEMENTS
VILLAGE OF DOBBS FERRY
WESTCHESTER COUNTY, NEW YORK

NOTICE IS HEREBY GIVEN that sealed bids for performing the work herein described will be received by the Village of Dobbs Ferry, NY, at the Office of the Village Administrator, Village Hall, 112 Main Street, Dobbs Ferry, NY 10522, until **October 7th, 2022 at 10 AM** and immediately thereafter the bids will be opened and read aloud for the furnishing and/or installing of the following:

Furnish all labor, materials, equipment and incidentals necessary for the installation of new drainage structures, manholes, catch basins, DIP and HDPE pipe, concrete curbs, gutters, asphalt pavement and all applicable appurtenances; clean and restore the site, all in accordance with the Contract Drawings and these Specifications.

No bids will be received or considered after the time stated above.

Specifications and Bid Proposal Forms will be available on **Friday, September 23rd, 2022**. Bid Package may be obtained at <https://www.dobbsferry.com/home/pages/bids-rfps> or at Village Hall.

A bid bond, certified check or bank check in the amount of 5% of bid must accompany the bid proposal. All bids must be submitted in a sealed envelope bearing the name and address of the bidder and clearly marked **"BELLAIR DRIVE DRAINAGE IMPROVEMENTS"**.

The Village Administrator reserves the right to accept or reject any or all bids and to waive any informalities at her discretion, and to award contracts in a manner deemed to be in the best interests of the Village of Dobbs Ferry even if such award is to other than the lowest bidder.

All technical questions should be directed to AI Engineers, Inc., Dolph Rotfeld Engineering Division, 570 Taxter Road, Elmsford, NY 10523 at (914) 631-8600.

Melissa Ferraro
Village Administrator
Village of Dobbs Ferry

Date of Publication September 23rd, 2022

SECTION B
INFORMATION FOR BIDDERS

INFORMATION FOR BIDDERS

PROPOSALS are requested for the **Bellair Drive Drainage Improvements** and related work for the Village of Dobbs Ferry, New York, in accordance with specifications and other Contract Documents prepared by AI Engineers, Inc., Dolph Rotfeld Engineering Division, 570 Taxter Road, Elmsford, NY 10523.

Each Proposal shall be made on a form prepared by the Engineer and included as one of the Contract Documents; and shall be submitted in a sealed envelope bearing the title of work and name of the Bidder. The Contractor's Bid shall be submitted in the entire bound Specifications and Contract Documents booklet including all original forms, any deviation shall be grounds for disqualification of bid.

In case of a difference between the stipulated amount of the Proposal written in words and the stipulated amount written in figures, the stipulated amount stated in words shall govern.

Proposals shall not contain any recapitulations of the work to be done. Alternate proposals will not be considered unless called for. Oral proposals or modifications will not be considered.

Before submitting a Proposal, Bidders shall carefully read the Specifications and other contract Documents, shall visit the site, and shall fully inform themselves as to all existing conditions and limitations, and shall include in the Proposal a sum to cover the cost of all items included in the Contract Drawings and Documents.

Proposals shall be delivered by the time and to the place stipulated in the advertisement. It is the sole responsibility of the Bidder to see that his/her Proposal is received in proper time. Any Proposal received after the scheduled closing time for receipt of Proposals shall be returned to the Bidder unopened.

Any Bidder may withdraw his Proposal, either personally or by written request, at any time prior to the scheduled closing time for receipt of Proposals.

Proposals will be opened and publicly read aloud at the time and place set forth in the Notice to Bidders.

The contract will be awarded to the lowest and/or best qualified responsible Bidder who complies with these instructions and with the Legal Notice. The Village reserves the right to reject any or all Proposals or to waive any formality or technicality in any Proposal in the interest of the Village. No Bidder may withdraw his/her Proposal for a period of 45 days after the date of opening thereof.

If any person contemplating submitting a Proposal is in doubt to the true meaning of any part of the Drawings, Specifications or other Contract Documents, or finds discrepancies in, or omissions from, the Drawings or Specifications, he may submit to the Engineer a written request for an interpretation or correction thereof, The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the documents will be made only by

Addendum duly issued and a copy of the Addendum will be mailed or delivered to each person receiving a set of the Contract Documents. Neither the Village nor the Engineer will be responsible for any other explanations or interpretations of the Contract Documents.

Any Addenda issued during the time of the bidding, or forming a part of the Contract Documents received by the Bidder for the preparation of a Bid shall be covered in the Proposal and shall be made a part of the Contract. Receipt of each Addendum shall be acknowledged in the Proposal.

No person, firm or corporation shall be allowed to make, file or be interested in more than one Proposal for the same Contract as the prime bidder. A person, firm or corporation who has submitted a sub-proposal to a Bidder, or who has quoted prices on materials to a Bidder, is not hereby disqualified from submitting a sub-proposal or quoting prices to other Bidders.

The work under this contract shall be completed within ninety (90) calendar days after signing of the contract, unless the Village waives adherence to this date in writing. The Contract will be required to pay as liquidated damages, the sum of nine hundred dollars (\$900.00) for each calendar day beyond said time that is required to satisfactorily complete the work of this project.

The attention of persons intending to submit proposals is specifically called to the fact that no plea will be accepted in which a Contractor pleads misunderstanding or deception of estimates of quantities, character, scope of work, location or other conditions surrounding same. Permission will not be given to withdraw, modify or explain any proposal or bid after it has been deposited. To be entitled to consideration, a Certified Check or Bond payable to the Village of Dobbs Ferry, New York shall accompany the sealed bid, for the sum equal to 5% of the bid price. The checks of the unsuccessful bidders shall be returned within 30 days of the bid opening. Within ten (10) days of notification of acceptance and approval of the proposal, the successful bidder shall furnish the performance bond described herein, at which time the 5% check will be returned. Should the bidder neglect to or refuse to furnish the aforesaid bond, the 5% shall be retained by the Village of Dobbs Ferry, New York.

The Contractor shall provide a **Performance Bond** issued by a solvent insurance company authorized to do business in the State of New York, which will indemnify and insure the Village of Dobbs Ferry, New York, so that all work herein required to be performed and all material to be furnished, will be satisfactorily completed in accordance with this proposal. The amount of the bond shall be 100% of the amount of the contract price. The form of this bond is included herein.

The Contractor shall also pay for and furnish a separate **Labor and Material Payment Bond** guaranteeing prompt payment of monies due to all persons supplying the Contractor or any Sub-contractor with work, labor or materials employed and used in carrying out the Contract. The amount of such bond shall be 100% of the amount of the contract price. The form of this bond is included herein.

In addition, at the time of submitting for final payment, a two-year **Maintenance Bond** guaranteeing against defective materials and workmanship will be required in an amount equal to one hundred percent (100%) of the contract amount. The form of this bond is included herein.

The Contractor shall comply with all local, state, and federal laws, rules and regulations applicable and with the New York State Labor Law.

All costs and expenses for obtaining and providing required shop drawings, submittals, Insurances and Bonds shall be deemed included in all items of this contract and therefore no separate payment item is provided.

Regarding Subcontractors, any material purchased by the Contractor and not used by him in his work shall be considered a Subcontract. See Section H (General Conditions) for more information.

Contractor must be in contact and must coordinate with all relevant utility companies. Contractor to who the contract is awarded shall contact and coordinate with the following individuals:

1. Village of Dobbs Ferry Department of Public Works
 - a. Office (914) 693-5506
2. Consolidated Edison
3. Verizon
4. Cable Vision
5. Veolia

Please note that only calling in a "Code 753 – Call Before You Dig" will not be sufficient as part of this contact and coordination requirement.

Any questions regarding the plans or specifications shall be directed to AI Engineers, Inc., no later than September 29th, 2022.

SECTION C

BID FORMS

**VILLAGE OF DOBBS FERRY
BELLAIR DRIVE DRAINAGE IMPROVEMENTS
BID PROPOSAL FORM**

To: **Village Administrator – Village Hall
Dobbs Ferry New York**

Bid Submitted by:

(Name)

(Address)

(Telephone No.)

1. I/We do hereby declare that I/We have carefully examined the Notice to Bidders, the Plans, and the Specifications relating to the above entitled matter and the work, and have also examined the site.
2. I/We do hereby offer and agree to furnish all materials, to fully and faithfully construct, perform and execute all work in the above titled matter in accordance with the Plans, Drawings, and Specifications relating thereto, and to furnish all labor, tools, implements, models, forms, transportations and materials necessary and proper for the purpose and the price/prices as given on the bid forms.
3. I/We do hereby declare that the prices so stated cover all expenses of every kind incidental to the completion of said work, and the contract therefore, including all claims that may arise through damages or any other cause whatsoever.
4. I/We do hereby agree that I/We will execute a contract therefore, containing all the terms, conditions, provisions and covenants necessary to complete the work according to the Plans and Specifications therefore within 10 business days after the award of the contract and if I/We fail to execute said contract within said period of time, that the Village Board shall have the power to rescind said award and also that the said Village Board shall retain the proceeds of the certified check, or require the payment of the sum of the bid bond. The Contract execution will serve as the official notification to commence work.
5. I/We do also declare and agree I/We will commence the work within five days after the Contract execution and will complete the work fully and in every respect on or before the time specified in said Contract and do authorize the said Board, in case of failure to complete the work within such specified time, to employ such men, equipment and materials as may be necessary for the proper completion of said work and to deduct the cost thereof from the amount due under the Contract.
6. I/We agree that the Village reserves the right to select any one, combination of, or all the Bid items in this proposal for the Contractor to complete without affecting any of the Bid prices.

7. I/We hereby affirm that by submission of this Bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under the penalty of perjury, that to the best of knowledge and belief:
 - (a) the prices in this Bid have been arrived at independently without collusion, consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor;
 - (b) unless otherwise required by law, the prices which have been quoted in this Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and
 - (c) no attempt has been made or will be made-by the Bidder to induce any other person, partnership or corporation to submit or not submit a Bid for the purpose of restricting competition.
 - (d) no member of the Village Board or and officer or employee of the Village of Dobbs Ferry, New York, or person whose salary is payable in whole or in part from the said Treasury is, shall be or become interested, directly, as contracting party, partner, stockholder, surety or otherwise, in this Bid, or in the performance of the Contract, or in the supplies, materials or equipment and work or labor to which it relates, or in any portion of the profits thereof.
8. I/We hereby further agree that this proposal is a firm Bid and shall remain in effect for a period of at least forty five (45) calendar days from the date of the opening of Bids, and that with said period of forty five (45) days, the Village of Dobbs Ferry will accept or reject this proposal, or this period may be extended by mutual agreement.
9. I/WE do hereby declare that, if this is a Corporate Bid, I have been duly authorized to act as the Signator on this proposal in behalf of this Corporation.
10. I/We hereby affirm under penalty of perjury, the truth of all statements in this proposal.
11. I/We hereby agree that I/We accept the unit prices on the following pages for the various items of work, and for additions to or deletions from the stated quantities.
12. I/We hereby agree that I/We shall make no claim on account of any variation of the approximate estimate in the quantities of work to be done, whether the actual quantities are greater, smaller or completely deleted. A change in the quantity of any item shall not be regarded as sufficient grounds for a change in the price of that item.

BASE BID (As per Special Conditions): *Total Bid for estimated quantities:

(written in numbers)

(written in words)

*The **TOTAL BID** shall be the sum of the extensions (unit price multiplied by estimated quantity, for each item). It is stated here only as a convenience for comparison of bids. If there are any errors in addition or multiplication, the unit prices for each item shall govern, and the bid comparison will be made on the basis of correct arithmetic applied to these unit prices. In case of a discrepancy between the unit price in words and the unit price in numbers, the unit price in words shall govern.

The estimated quantities are not guaranteed, and are only for bid comparison purposes and final payment will be made for actual quantities regardless of the estimated quantities contained herein.

(Legal Name of Bidder) Date: _____

Address of Individual, Firm or Corporation

Telephone Number of Individual, Firm or Corporation

By: _____
(Authorized Signatory)

Corporate Seal
(If incorporated)

Bidder acknowledges receipt of Addenda as follows:

Signature

Signature

Signature

**Village of Dobbs Ferry
Bellair Drainage Improvements**

BID SHEETS

Note: Unit prices are to be written in both words and numbers.
In case of any discrepancy those prices shown in words shall govern.
All prices will be in dollars and cents.

Item No.	Quantity	Unit	Item with Unit Price Written in Words	Unit Price in Numbers	Extension: Est. Quantity Times Unit Price in Numbers
1M	1	LS	Miscellaneous Additional Work Fifty Thousand		
				\$50,000.00	\$50,000.00
		LS			
2M	20	CY	Miscellaneous Earth Excavation		
		CY			
5R	200	CY	Rock Excavation - Trench (NO BLASTING)		
		CY			
10HDPE-15"	518	LF	Furnish & Install 15" HDPE Watertight Storm Water Drainage Line		
		LF			
10HDPE-18"	18	LF	Furnish & Install 18" HDPE Watertight Storm Water Drainage Line		
		LF			

BID SHEETS

Item No.	Quantity	Unit	Item with Unit Price Written in Words	Unit Price in Numbers	Extension: Est. Quantity Times Unit Price in Numbers
10DIP-16"	100	LF	Furnish & Install 16" DIP Storm Water Drainage Line		
			LF		
20G	75	LF	Furnish & Install Concrete Curb & Gutter		
			LF		
25CC	1,117	LF	Furnish & Install Concrete Curbing w/ Reinforcing		
			LF		
25CC	350	LF	Furnish & Install Concrete Curbing as Directed by Engineer		
			LF		
30-S	157	LF	Pavement Sawcutting		
			LF		
39	20	CY	Furnish & Install Crushed		
			CY		

**Village of Dobbs Ferry
Bellair Drainage Improvements**

BID SHEETS

Note: Unit prices are to be written in both words and numbers.
In case of any discrepancy those prices shown in words shall govern.
All prices will be in dollars and cents.

Item No.	Quantity	Unit	Item with Unit Price Written in Words	Unit Price in Numbers	Extension: Est. Quantity Times Unit Price in Numbers
43	40	TONS	Furnish & Install Truing & Leveling Course		
			TONS		
51WMA - Top Course	275	TONS	Furnish & Install Top Course Warm Mix Asphalt		
			TONS		
51	275	SY	Furnish & Install Temporary Pavement		
			SY		
51M	2,012	SY	Cold Milling and Removal of Bituminous Pavements		
			SY		
73	191	CY	Furnish & Install Control Backfill Material		
76	1	LS	Maintenance & Protection of Traffic		
			LS		
102CB	10	EA	Furnish & Install Precast Concrete Catch Basin		
			EA		

**Village of Dobbs Ferry
Bellair Drainage Improvements**

BID SHEETS

Note: Unit prices are to be written in both words and numbers.
In case of any discrepancy those prices shown in words shall govern.
All prices will be in dollars and cents.

Item No.	Quantity	Unit	Item with Unit Price Written in Words	Unit Price in Numbers	Extension: Est. Quantity Times Unit Price in Numbers
102CBO	1	EA	Furnish & Install oversized Precast Concrete Catch Basin		

			_____ EA	_____	_____
102MC	4	EA	Furnish & Install Precast Concrete Manholes		

			_____ EA	_____	_____
103	3	EA	Connection To Existing Structure		

			_____ EA	_____	_____

STATE LAWS AND REGULATIONS

GRAND JURY TESTIMONY: Bidders attention is directed to the following clause, Chapter 605 of the New York State Laws of 1959:

"A person who refuses, when called before a grand jury to testify concerning this contract or any transaction in connection therewith, to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant question concerning this contract or transaction, shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any contract with any municipal corporation or any public department, agency or official thereof for goods, work, or services, for a period of 5 years after such refusal; and any and all contracts made with any municipal corporation or any public department, agency or official thereof after July 1st, 1959, may be cancelled or terminated by the municipal corporation without incurring any penalty or damages on account of such cancellation or termination; but any money owing to the municipal corporation for goods delivered or work done prior to the cancellation or termination shall be paid."

NON-COLLUSION IN BIDDING: Each bidder shall submit a statement of non-collusion in bidding the work proposed herein. Failure to submit a non-collusive bidding certificate will constitute grounds for the rejection of said bid.

EMPLOYMENT PREFERENCE: The contractor shall comply in all respects with Section 222 of the Labor Law of the State of New York, and agrees that preference shall be given in employment to citizens of the State of New York who have been residents for at least six consecutive months immediately prior to the commencement of their employment, but persons other than citizens of the State of New York who may be employed by the contractor, or by any subcontractor, shall furnish satisfactory proof of residence in accordance with the rules adopted by the Industrial Commissioner of the State of New York. Upon demand of the aforesaid Industrial Commissioner, the contractor shall furnish a list of the names and addresses of all his subcontractors. The contractor and each subcontractor shall keep a list of his employees, stating whether they are citizens of the State of New York, native born citizens or naturalized citizens and, in case of naturalization, the date thereof, and the name of the court in which granted. This contract shall be null and void if the provisions of said Section 222 aforesaid are not complied with.

SALES TAX EXEMPTION: The contractor's attention is directed to the changes made in Section 1115 of the Tax Law of the State of New York by Chapter 513 and 514 of the Laws of 1974. In connection with capital improvement contracts entered into on or after September 1, 1974, all tangible personal property which will become an integral component of a structure, building or real property of New York State, or any of its political subdivisions, including the Village of Dobbs Ferry, is exempt from State and local retail sales tax and compensating use tax. In formulating their proposals, all bidders shall exclude any dollar amounts for the payment of State and local retail sales tax and compensating use tax. The successful bidder shall be obligated to file the required Contractor Exempt Purchase Certificates.

LABOR AND WAGES: A governing provision in the contract will be the rate of wages of all labor applicable to the kind of work, as determined by the New York State Industrial Commissioner pursuant to the Labor Law which states that a schedule of wages so determined by the New York State Industrial Commissioner and the Fiscal Officer be incorporated in the contract by the Village.

The Labor Department Schedule of Hourly Minimum rates of wages when omitted from these specifications are still included even if not received at the time of printing of these specifications. Copies of the labor rates shall be forwarded to the bidders as and when received. Such omission does not vary or affect the obligation of the contractor to comply with the law or his compensation therefor.

The contractor and each and every subcontractor performing work on 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, and particularly Article 8 thereof. All provisions of Section 220 of the Labor Law shall be deemed a part of this contract.

NON COLLUSIVE BIDDING CERTIFICATION

Made pursuant to Section 103-d of the New York State General Municipal Law, as amended

- a. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid party thereto certifies as to its own organization, under penalty of perjury, that to the best of his knowledge and belief:
- (1) The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor; and
 - (2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to the opening, directly or indirectly, to any other bidder or to any competitor; and
 - (3) No Attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.
- b. A bid shall not be considered for award nor shall any award be made where Sections a. (1), (2), and (3) above have not been complied with, provided, however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement that sets forth in detail the reasons therefor. Where Sections a.(1), (2), and (3) above have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the Village of Dobbs Ferry thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

Dated: _____

(Seal of Corporation)

Legal Name of Person, Firm or Corporation

Address of Person, Firm or Corporation

Signature: _____

Print Name & Title: _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____

_____, hereinafter called the Principal, as Principal, and the

_____, of

_____ a corporation duly organized under the laws of the State of _____ hereinafter called the Surety, as Surety, are held and firmly bound unto

_____ hereinafter called the Obligee in the sum of

_____ Dollars (\$ _____), for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents.

WHEREAS, the Principal has submitted a bid for _____

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bond as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof or in the event of the failure of the Principal to enter such contract and give such bond or bonds, the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

SIGNED AND SEALED this _____ day of _____ AD 20_____

In the presence of:

{ _____ (Seal)

PRINCIPAL

WITNESS _____

{ _____

TITLE

{ _____ (Seal)

SURETY

WITNESS _____

{ _____

TITLE

STATEMENT OF QUALIFICATIONS

The following is a list of places where we have performed work of similar character and magnitude, together with references:

Location	Description of Work & Date of Completion	Approximate Cost	Name and Phone of Engineer or Owner

The full names and places of residences of all officers and principals in the bidding entity of the foregoing proposal are as follows:

CERTIFICATE OF EQUIPMENT

_____ hereby certify that (he is, they are)
the owner or lessee of the equipment necessary for the execution of this Contract, and
further certify that (he is, they are) fully prepared with the necessary capital, material and
machinery to conduct this work as herein specified. The equipment available for the
execution of this Contract is listed below:

Name of Bidder (typed)

Witness

By _____

Signature

DEFAULT OF PREVIOUS CONTRACTS

Has Bidder defaulted on or failed to complete a contract within 5 years:

☐ NO

☐ YES

Has any officer or principal of the bidding entity been involved with a firm that has defaulted on or failed to complete a contract within 5 years:

☐ NO

☐ YES

If answer to either question is yes, please explain below:

Location	Description of Work	Approximate Cost	Name and Phone of Engineer or Owner	Reason for Default

Certification - The information above is true and complete to the best of my knowledge and belief. A willfully false statement is punishable by law and disqualification of bid. (U.S. Code, Title 18, Section 1001).

(NAME AND TITLE OF SIGNER - PLEASE TYPE)

(SIGNATURE)

(DATE)

CONTRACTOR'S DECLARATION

The names and addresses of all partners, officers, or parties interested in the foregoing bid are as follows:

<u>Full Name</u>	<u>Title of Office Held if Bidder is a Corp.</u>	<u>Address</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

The undersigned bidder hereby designates the address stated below as the place to which all notices and letters may be delivered or mailed.

Contractor

Witness

By _____
(signature)

Title _____

The business address of the bidder is:

The above-named bidder is a (corporation)(partnership)(individual) -- strike out designations which do not apply -- in the State of _____.

DATE: _____

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____

_____, Secretary of the Corporation named as Principal in the within
bond; that _____
_____, who
signed the said bond on behalf of the Principal was then _____

_____ of said corporation; that I know his
signature thereto is genuine; and that said bond was duly signed, sealed, and attested to
for and in behalf of said corporation by authority of this governing body.

(Corporate Seal)

Title

**CERTIFICATION BY BIDDER REGARDING EQUAL EMPLOYMENT
OPPORTUNITY**

Name of Bidder

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246, Part II, Section 203 (b), (30F.R. 12319-25). Each Bidder is required to state in his bid whether he has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether he has filed all compliance reports due under applicable filing requirements.

CONTRACTOR'S CERTIFICATION

Contractor's Name: _____

Address: _____

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause. *YES* ___ *NO* ___
2. Compliance reports were required to be filed in connection with such contract or subcontract. *YES* ___ *NO* ___

If "YES", state what reports were filed and with what agency.
3. Bidder has filed all compliance reports due under applicable instructions, including SF-100. *YES* ___ *NO* ___
4. If answer to item is "NO", please explain in detail on reverse side of this certification.

Certification - The information above is true and complete to the best of my knowledge and belief. A willfully false statement is punishable by law. (U.S. Code, Title 18, Section 1001).

(NAME AND TITLE OF SIGNER - PLEASE TYPE)

(SIGNATURE)

(DATE)

CERTIFICATION OF NONSEGREGATED FACILITIES

(Applicable to federally assisted construction contracts and related subcontracts exceeding \$10,000, which are not exempt from the Equal Opportunity clause.)

The federally assisted construction contractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to permit their services at any location, under his control, where segregated facilities are maintained. The federally assisted construction contractor certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term 'segregated facilities' means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. The federally assisted construction contractor agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certifications in his files.

Signature

Date

Name and Title of Signer (Please Type)

NOTE: The penalty for making false statements in offers is prescribed in 18 U.C. 1001.

CONTRACTOR'S ACKNOWLEDGMENT

(If Corporation)

STATE OF NEW YORK (SS:
COUNTY OF WESTCHESTER)

On this ____ day of _____, 20____, before me personally came _____, to me known, and known to me to be the _____ of _____, the corporation described in and which executed the within instrument, who being by me duly sworn, did depose and say that he resides at _____ and that he is _____ of said corporation and knows the corporate seal of the said corporation; that the seal affixed to the within instrument is such corporate seal and 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

CONTRACTOR'S ACKNOWLEDGMENT

(If Individual)

On this ____ day of _____, 20____, before me personally came _____, to me known and known to me to be the same person described in and who executed the within instrument and he duly acknowledged to me that he executed the same for the purpose herein mentioned and, if operating under any trade name, that the certificate required by the New York State Penal Law, Sections 440 and 440-b has been filed with the County Clerk of Westchester County.

Notary Public

CONTRACTOR'S ACKNOWLEDGMENT

(If Partnership)

On this ____ day of _____, 20____, before me personally came _____, to me known, and known to me to be a member of the firm of _____ and the person described in and who executed the within instrument in behalf of said firm, and he acknowledged to me that he executed the same in behalf of, and as the act of said firm for the purposes herein mentioned and that the certificate required by the New York State Penal Law, Sections 440 and 440-b has been filed with the County Clerk of Westchester County.

Notary Public

CERTIFICATE OF AUTHORITY

I, _____ certify that
(officer other than officer executing proposal documents) I am the

_____ of _____
(title) (name of contractor)

the "Contractor) a corporation duly organized and in good standing under the law under which organized, e.g. the New York Business Corp. Law) named in the foregoing agreement; that _____ (person executing bid proposal) who signed said agreement on behalf of the Contractor was, at the time of execution _____ (the "Contractor) of the Contractor; that said agreement was duly signed for and in behalf of said Contractor by authority of its Board of Directors, thereunto duly authorized, and that such authority is in full force and effect at the date hereof.

Date: _____

(Signature)

(Corporate seal)

STATE OF NEW YORK) SS:
COUNTY OF WESTCHESTER)

On this ____ day of _____, 20____, before me personally came _____, to me known, and known to me to be the _____ of _____ the corporation described in and which executed the above certificate, who being by me duly sworn did depose and say that he resides at _____, and that he is _____

of said corporation and knows the corporate seal of said corporation; that the seal affixed to the above certificate is such corporate seal and 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

CERTIFICATE OF SURETY

The undersigned hereby certify that they are the duly authorized agents of

duly authorized to do business in the State of New York, and agree to furnish to

surety bonds for the faithful performance of any and all provisions contained in the Specifications and Contract. The maximum amount that we will be surety for on each bond is:

Surety Company or Agent

By _____

The terms of the Surety Company for furnishing the bond are hereby
accepted.

Name of Bidder

By _____
(signature)

Witness

Title _____

SECTION D

**INDEMNIFICATION AGREEMENT,
AGREEMENT, PERFORMANCE, AND
LABOR & MATERIAL PAYMENT BOND**

INDEMNIFICATION AGREEMENT

The Contractor agrees to protect, defend, indemnify and hold the Village of Dobbs Ferry, AI Engineers, Inc., Dolph Rotfeld Engineering Division, 570 Taxter Road, Elmsford, NY 10523, and any agents, officers, employees and consultants of any of them; free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees or other expenses or liabilities of every kind and character arising out of or relating to any and all claims, liens, demands, obligations, actions, proceedings or causes of action of every kind and character in connection with or arising directly or indirectly out of this agreement and/or the performance hereof: without limiting the generality of the foregoing, any and all such claims, etc., relating to personal injury, death, damage to property, defects in materials or workmanship, actual or alleged infringement of any patent, trademark, copyright (or application for any thereof) or of any other tangible or intangible personal or property right, or any actual or alleged violation of any applicable statute, ordinance, administrative order, rule or regulation, decree of any court, shall be included in the indemnity hereunder. The Contractor further agrees to investigate, handle, respond to, provide defense for and defend any such claims, etc., at his sole expense and agrees to bear all other costs and expenses related thereto, even if it (claims, etc.), is groundless, false or fraudulent. In any case in which such indemnification would violate Section 5-322.1 of the New York General Obligations Law, or any other applicable legal prohibition, the foregoing provisions concerning indemnification shall not be construed to indemnify the Owner for damage arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of the Owner, or its employees.

SIGNED AND SEALED this _____ day of _____ A.D. 20_____

In the presence of:

{ _____ (Seal)

PRINCIPAL

WITNESS

{ _____
TITLE

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 20__, by and between _____, (a corporation organized and existing under the state of

_____)*(a partnership consisting of
_____)*(an individual trading as
_____)*(hereinafter called the "Contractor"
and _____ Village of Dobbs Ferry, New York hereinafter called the "Owner"

WITNESSETH, that the Contractor and the Owner for the considerations stated herein mutually agree as follows:

Article 1. Statement of Work. The Contractor shall furnish all supervision, technical personnel, labor, materials, machinery, tools, appurtenances, equipment and services, including utility and transportation services and perform and complete all work and required supplemental work for the completion of this Contract in strict accordance with the hereinafter referenced Contract Documents, including all Addenda thereto, numbered _____

Article 2. The Contract Price. The Owner will pay the Contractor for the performance of the Contract in current funds, for the total quantities of work performed at the unit prices stipulated in the bid for the respective items of work completed subject to additions and deduction as provided in the Section-Changes in the work in the General Conditions.

* Strike out the two terms not applicable.

Article 3. Contract Documents. The Contract Documents shall consist of the following (including their attachments and exhibits):

- | | |
|--|---|
| a. This agreement | f. Special Conditions |
| b. Addenda (if any) | g. General Conditions |
| c. Invitation for Bids | h. Technical Specifications |
| d. Instructions to Bidders | i. Drawings (as listed in the Schedule of Drawings) |
| e. Signed copy of Bid, With all attachments required for the Bidding | j. Payment & Performance Bonds |
| | k. Certificates of Insurance |

This Agreement, together with other Documents enumerated in the Article 3, which said other Documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto. In the event that any provision in any component part of this Contract conflicts with any provision of any other component, the part first enumerated in this Article 3 shall govern, except as otherwise specifically stated.

IN WITNESS WHEREOF, the parties hereto have caused this AGREEMENT to be executed in five (5) original copies on the day and year first above written.

ATTEST: _____
(Contractor)

By: _____
(Name of Contractor)

Title: _____

Village of Dobbs Ferry, New York

By: _____

Title: _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS that _____

(Here insert the name and address or legal title of the Contractor)

as Principal, hereinafter called the Contractor, and _____

(Here insert the legal title of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto _____

(Here insert the name and address or legal title of the Owner)

_____ as Oblige hereinafter called Owner, in the amount of _____ Dollars (\$_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____

20____ entered into a Contract with Owner for _____

in accordance with drawings and specifications prepared by _____

(Here insert full name and title)

which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, the Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise shall remain in full force and effect.

- A. The Surety hereby waives notice of any alteration or extension of time made by the Owner.
- B. Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly
- C. Complete the Contract in accordance with its terms and conditions, or
 - 1. Obtain a bid or bids for submission to Owner for completing the Contract in accordance with terms and conditions, and upon determination by Owner and Surety of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract price; but the exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount forth in the first paragraph hereof. The term "balance of the Contract price," as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereof less the amount properly paid by Owner to Contractor.
 - 2. Any suit under this bond must be instituted before the expiration of two (2) years from the date which final payment under the Contract fails due.
- D. No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of Owner.

SIGNED AND SEALED this _____ day of _____ A.D. 20_____

In the presence of:

{ _____ (Seal)

PRINCIPAL

WITNESS

{ _____

TITLE

{ _____ (Seal)

SURETY

WITNESS

{ _____

TITLE

LABOR AND MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS that _____

(Here insert the name and address or legal title of the Contractor)

as Principal, hereinafter called Principal, and _____

(Here insert the legal title of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto

(Here insert the name and address or legal title of the Owner)

as Oblige, hereinafter called Owner, for the use and benefit of claimants as herein below defined,

in the amount of _____

Dollars (\$ _____)

for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated _____,

20____ entered into a contract with Owner for _____

in accordance with the drawings and specifications prepared by _____

(Here insert full name and title)

which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably for use in the performance of the Contract, then this obligation shall

be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

- A. A claimant is defined as one having a direct contract with the Principal or with a subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.
- B. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.
- C. No suit or action shall be commenced hereunder by any claimant,
 - 1. Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the Owner, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the material for which said claim is made, stating with substantial accuracy the amount claimed and the name of the part to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner which is legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.
 - 2. After the expiration of one (1) year following the date on which the Principal ceased work on such Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 - 3. Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.

- D. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and again this bond.

SIGNED AND SEALED this _____ day of _____ A.D.20_____

In the presence of:

{ _____ (Seal)
PRINCIPAL

WITNESS

{ _____
TITLE

{ _____ (Seal)
SURETY

WITNESS

{ _____
TITLE

SECTION E

SHOP DRAWING SUBMITTAL FORM,
PAYMENT SUBMISSION FORM
& GENERAL RELEASE

SUBMITTAL FORM

SUBMITTALS:

All submittals prepared by or for the Contractor, shall be thoroughly checked by the Contractor for accuracy and conformance to the intent of the Contract Documents before being submitted to the Engineer and shall bear the Contractor's signature certifying that they have been so checked. Before submitting them to the Engineer, all submittals shall be properly labeled and consecutively numbered. Contractor shall attach this completed sheet to all submittals. The Contractor shall note, in writing, if there are any deviations from the Contract drawings and specifications.

CONTRACT NO.: _____ DATE: _____

NAME OF PROJECT: _____

SPECIFICATION SECTION: _____

MANUFACTURER: _____

ITEM/MODEL NO.: _____

This document has been reviewed, coordinated and checked for accuracy of content and for compliance with the Contract Documents. The information contained herein has been coordinated with all other Contract Work.

CONTRACTOR: _____

SIGNATURE: _____

DO NOT WRITE BELOW THIS LINE

☐ **NO EXCEPTION TAKEN**

☐ **MAKE CORRECTIONS NOTED**

☐ **REJECTED**

☐ **REVISE AND RESUBMIT**

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for; dimensions which shall be confirmed and correlated at the job site; Fabrication processes and techniques of construction; Coordination of his work with that of all other trades; and the satisfactory performance of his work.

AI Engineers, Inc., Dolph Rotfeld Engineering Division

570 Taxter Road, Elmsford, NY 10523

DATE _____ BY _____

PAYMENT SUBMISSION FORM

PROJECT: _____

PAYMENT ESTIMATE NO. _____

DATE _____

Work Credited Under Unit Prices	
Change Orders	
Total Work Credited To Date	
5% Retained	
Sub-Total	
PREVIOUS PAYMENTS	
TOTAL DUE THIS PAYMENT	

I have reviewed the estimate and certify that the quantities are correct and that I know that there are no claims for additional work.

(CONTRACTOR)

DATE: _____

I hereby certify that the above is the total amount of work completed, and the foregoing payment is due under the contract.

(RESIDENT ENGINEER)

DATE OF ESTIMATE

PAGE

of

[illegible]

GENERAL RELEASE

(TO-BE SUBMITTED WITH REQUISITION FOR FINAL PAYMENT)

KNOW ALL MEN BY THESE PRESENTS, that

Contractor

for and in consideration of the sum of _____

lawful money of the United States of America, to it in hand paid by

(Owner/Contracting Agency)

have remised, released, quit-claimed, and forever discharged, and by these presents do for its successors and assigns remise, release, quit-claim, and forever discharge the said

(Owner/Contracting Agency)

and its successors and assigns and administrators, of and from and all manner of action and actions, caused and causes of action, suits, debts, dues, sum and sums of money, accounts, reckonings, bonds, bills, specialties, covenants, contracts, controversies, agreements, promises, variances, trespasses, damages, judgements, patents, extents, executions, claims and demands whatsoever in law and unity which against the said

(Owner/Contracting Agency)

now have or which heirs, executors, or administrator hereafter can, shall, or may have, for upon or by reason of any matter, cause or thing whatsoever, from the beginning of the world to the day of the date of these presents rising out of the construction, in accordance with contract entered into between parties hereto, dated _____, two thousand and _____, any admittance or supplements thereto.

IN WITNESS WHEREOF, the undersigned corporation has caused this agreement to be signed by its _____ and its corporate seal to be hereto affixed and duly attested by its _____ this _____ day of _____, 20__.

ATTEST:

PRINCIPAL:

SECTION F
MAINTENANCE BOND

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That We, _____
_____ (hereinafter called the Principal)
as Principal and the _____, a _____ Corporation with an
office and place of business for the State of New York at _____, New York,
(hereinafter called the Surety) as Surety, are held and firmly bound unto the _____

(hereinafter called the Oblige) as Oblige in the sum of _____
_____ (\$ _____) DOLLARS,
lawful money of the United States of America, for the payment whereof the Principal and
Surety bind themselves, their successors and assigns, jointly and severally, firmly by
these presents.

Signed, sealed and dated this _____ day of _____, 20 _____.

WHEREAS, the Principal heretofore entered into a written contract with the
Oblige for _____

WHEREAS, said Contract provides that the Principal shall guarantee _____

NOW, THEREFORE, the condition of this obligation is such, that if the above
Principal shall indemnify the Oblige against loss by reason of his failure to make good
at his own expense any defects or deficiencies in materials or workmanship which may
appear in the work under said contract with the period of two (2) years from the date of
acceptance of the work, then this obligation shall be void; otherwise to remain in full
force and effect.

Principal

By: _____

By: _____

MAINTENANCE BOND

STATE OF _____)

COUNTY OF _____)

On this _____ day of _____ 20 _____ before me
personally appeared the within named _____
to me known, and known to me to be _____,
the individual described in and who executed the within bond, and _____
_____ acknowledged to me that he _____
executed the same.

NOTARY PUBLIC

SECTION G

WAGE RATES



Kathy Hochul, Governor

Roberta Reardon, Commissioner

Village of Dobbs Ferry
Dillon Singleton, Engineer
112 Main St
Dobbs Ferry NY 10522

Schedule Year 2022 through 2023
Date Requested 09/22/2022
PRC# 2022010907

Location Bellair Drive
Project ID#
Project Type Improve drainage on Bellair drive

PREVAILING WAGE SCHEDULE FOR ARTICLE 8 PUBLIC WORK PROJECT

Attached is the current schedule(s) of the prevailing wage rates and prevailing hourly supplements for the project referenced above. A unique Prevailing Wage Case Number (PRC#) has been assigned to the schedule(s) for your project.

The schedule is effective from July 2022 through June 2023. All updates, corrections, posted on the 1st business day of each month, and future copies of the annual determination are available on the Department's website www.labor.ny.gov. Updated PDF copies of your schedule can be accessed by entering your assigned PRC# at the proper location on the website.

It is the responsibility of the contracting agency or its agent to annex and make part, the attached schedule, to the specifications for this project, when it is advertised for bids and /or to forward said schedules to the successful bidder(s), immediately upon receipt, in order to insure the proper payment of wages.

Please refer to the "General Provisions of Laws Covering Workers on Public Work Contracts" provided with this schedule, for the specific details relating to other responsibilities of the Department of Jurisdiction.

Upon completion or cancellation of this project, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

NOTICE OF COMPLETION / CANCELLATION OF PROJECT

Date Completed: _____ Date Cancelled: _____

Name & Title of Representative: _____

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

SECTION H
GENERAL CONDITIONS

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NOTE: The headings of the articles herein are intended for the convenience of reference only and shall not be considered as having any bearing on their interpretation.

GENERAL CONDITIONS

PART I

101. DEFINITIONS

Whenever used in any of the Contract Documents, the following meanings shall be given to the terms herein defined:

- a. The term "Contract" means the Contract executed by the Owner and the Contractor.
- b. The term "Owner" means the **Village of Dobbs Ferry**, which is authorized to undertake this Contract.
- c. The term "Contractor" means the person, firm or corporation entering into the Contract with the Owner to perform and complete the work involved in this Contract.
- d. The term "Subcontractor" means a person, firm or corporation supplying labor for work at the site of the project for and under separate contract or agreement with the Contractor.
- e. The term "Project Area" means the area shown on the drawing in the immediate vicinity of the work, unless otherwise defined in the Special Conditions.
- f. The term "Engineer" means the Engineer of the Project, or such of his subordinates or assistants as have Project Engineer status; or if a Consulting Engineer is employed to perform construction management and inspection, then this term shall apply to said Consulting Engineer and those subordinates and assistants that have Project Engineer status. A list of authorized Project Engineers will be furnished to the Contractor on request.
- g. The term "**Village**" means the **Village of Dobbs Ferry** within which the Project Area is situated.
- h. The term "Contract Documents" means and shall include the Documents listed in Article 3 of the Agreement.
- i. The term "Drawings" or "Contract Drawings" means the drawings listed in the Schedule of Drawings.
- j. The term "Technical Specifications" or "Supplemental Technical Specifications" means that part of the Contract Documents which describes, outlines and stipulates, the quality of materials to be furnished; the quality of workmanship required; measurement and payment.
- k. The term "Addendum" or "Addenda" means any changes, revisions or clarifications of the Contract Documents which have been duly issued by the Owner to prospective Bidders prior to the time of receiving Bids.

102. SUPERINTENDENCE BY CONTRACTOR

- a. Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall provide a competent superintendent, satisfactory to the Owner, for the work at all times during working hours with full authority to act for him. The Contractor

shall also provide an adequate staff for the proper coordination and expediting of his work. Should, in the opinion of the Owner, any language barrier exist between the superintendent and the Owner, the Contractor shall furnish a qualified interpreter.

- b. The Contractor shall layout his work including all survey required and he shall be responsible for all work executed by him under the Contract. He shall verify all figures, elevations, etc. before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

103. SUBCONTRACTS

- a. The Contractor shall not execute an agreement with any Subcontractor or permit any Subcontractor to perform any work included in this Contract until he has received written approval of such Subcontractor from the Owner.
- b. The Contractor shall be as fully responsible to the Owner for the acts and omissions of his Subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him. All subcontractors must have adequate superintendence on the work site when they are performing work.
- c. The Contractor shall cause appropriate provision to be inserted in all Subcontracts relative to the work to require compliance by each subcontractor with the applicable provisions of the Contract for the work embraced in this Contract.
- d. Nothing contained in the Contract shall create any contractual relation between any Subcontractor and the Owner.
- e. The Contractor shall not subcontract more than 50% of the total work of this contract. Any material purchased by the Contractor and not used by him in his work shall be considered a Subcontract.

104. OTHER CONTRACTS

The Owner reserves the right to let other Contracts in connection with this work or to perform work related to this project with his own forces. The Contractor shall offer other Contractors and the Owner reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and/or coordinate his work with theirs. The Contractor shall cooperate fully with such other Contractors, by scheduling his own work with that to be performed under other Contracts as may be directed by the Owner. The Contractor shall not permit or commit any act, which will interfere with the performance of work by any other Contractor as scheduled.

Wherever work being done by the Owner or its forces, or other Contractors, is contiguous to work covered by this contract, the respective rights of the various interests involved shall be established by the Owner, to secure the completion of the various portions of the work in general harmony.

If any part of the Contractor's work depends for proper execution or results upon the work of others, the Contractor shall inspect and promptly report to the Engineer in writing any defects or deficiencies in such work that render it unsuitable for such proper execution and results.

105. RESPONSIBILITIES OF CONTRACTOR

Except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools equipment, water light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fees or other expenses and all other services and facilities of every nature whatsoever necessary for the performance of the Contract and to complete this Contract in every respect within the specified time.

106. FITTING AND COORDINATION OF THE WORK

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, Subcontractors or Suppliers engaged upon this Contract. He shall be prepared to guarantee to each of the Subcontractors, the locations and measurements that they may require for the fitting of their work to all surrounding work. The Contractor shall, at his own expense, effect all cutting, fitting, or patching of his work required to make the same conform to the Contract Drawings and specifications and except with the consent of the Owner, not to cut or otherwise alter the work of any other Contractor.

107. MUTUAL RESPONSIBILITY OF CONTRACTOR

If, through acts or neglect on the part of the Contractor, any other Contractor or Subcontractor shall suffer loss or damage on the work, the Contractor shall settle with such other Contractor or Subcontractor by agreement or arbitration, if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against the Owner on account of any damage alleged to have been so sustained, the Owner will notify the Contractor, who shall defend at his own expense any suit based upon such claim, and, in any judgment or claims against the owner shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith and will in all other respects, including, but not limited to attorney's fees and court costs, hold harmless the Owner and Engineer.

108. ASSIGNMENT OR NOVATION

The Contractor shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the Owner; provided, however, that assignments to banks, trust companies, or other financial institutions may be made without the consent of the Owner.

No assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered and materials, tools and equipment supplied for the performance of the work under this Contract in favor of all persons, firms or corporations rendering such labor or services or supplying such materials, tools or equipment.

109. PROGRESS SCHEDULE

The Contractor shall submit within seven (7) calendar days after award a carefully prepared realistic Progress Schedule showing the proposed dates of starting and completing of each and every item of work on each and every section of work in accordance with these Specifications if applicable to this specific Contract. The Progress Schedule shall include as a minimum:

- a. The project name, number and geographic location.
- b. The contract time, contract beginning date, and ending date.

- c. The time of beginning and completion of each significant phase of this contract.

The initial requisition will not be approved for payment until said schedule is submitted. Said schedule will be revised or updated monthly unless otherwise permitted by the Owner. No monthly payments will be approved without a revised/updated monthly Progress Schedule approved by the Owner.

The Progress Schedule shall show the plan of construction and the proposed method of carrying out this work including a full statement of the equipment to be used.

110. COMMUNICATIONS

- a. All notices, demands, requests, instructions, approvals, proposals and claims must be in writing.
- b. Any notice to or demand upon the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the Agreement (or at such other office as the Contractor may from time to time designate) in a sealed, postage-prepaid envelope or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.
- c. All papers required to be delivered to the Owner shall, unless otherwise specified in writing to the Contractor, be delivered to the Village of Dobbs Ferry Village Hall, and any notice to or demand upon Owner shall be sufficiently given if so delivered, or if deposited in the United States mail in a sealed, postage- prepaid envelope or delivered with charges prepaid to any telegraph company for transmission to said Owner at such address, or to such other representatives of the Owner or to such other address as the may subsequently specify in writing to the Contractor for such purpose.
- d. Any such notice shall be deemed to have been given as of the time of actual delivery or (in case of mailing), when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt, as the case may be.

111. PAYMENTS TO CONTRACTOR

- a. Partial Payments
 1. The Engineer shall prepare an estimate of the work performed for partial payment as of a mutually agreed upon date at least 30 days after the beginning of work, and approximately every 30 days thereafter. The amount of the payment due the Contractor shall be determined by adding the total value of work completed to date and deducting (1) five percent (5%) of the total amount, to be retained until final payment and (2) the amount of all previous payments. The total value of work completed to date shall be based on the estimated quantities of work completed and on the unit prices, if any, contained in the Agreement.

There will be no payments or partial payments to the Contractor for materials purchased and stored/stockpiled on the project site.
 2. Monthly or partial payments made by the Owner to the Contractor are monies advanced for the purpose of assisting the Contractor to expedite the work of construction. All material and completed work covered by such monthly or partial payments shall remain the property of the Contractor, and he shall be responsible for the care and protection of

all materials and work upon which payments have been made. Such payments shall not constitute a waiver of the right of the Owner to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the Owner in all details.

b. Final Payment

1. After final inspection and acceptance by the Owner of all work under the Contract, the Contractor shall prepare his requisition for final payment which shall be based upon the carefully measured or computed quantity of each item of work at the applicable unit prices stipulated in the Agreement. The total amount of the final payment due the Contractor under this Contract shall be the amount computed without retainage less all previous payments. Final payment to the Contractor shall be made subject to his furnishing the Owner with a release in satisfactory form of all claims against the Owner, arising under and by virtue of his Contract, other than such claims, if any as may be specifically excepted by the Contractor from the operation of the release as provided elsewhere herein.
2. The Owner, before paying the final estimate, may require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the Project) and services to the Contractor, if the Owner deems the same necessary in order to protect its interest. The Owner, however, may if it deems such action advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts of any payment so made shall in no way impair the obligations of any surety or sureties furnished under this Contract.
3. If it was necessary for the Owner to expend money for labor, materials or equipment on this project because the Contractor failed to perform satisfactorily or promptly, and a bill for such sum remains unpaid, the Owner may deduct this sum from partial payments or the final payment. Furthermore, if the specifications provide for certain work to be done by the Owner with the fee or cost to be borne by the Contractor, and a bill for such services remains unpaid, the Owner may deduct this sum from the partial or the final payment.
4. Withholding of any amount due the Owner under the section entitled "LIQUIDATED DAMAGES" shall be deducted from the final payment due the Contractor. At the Owner's option, liquidated damages may be deducted from any partial payment.

c. Withholding Payments

Notwithstanding the above, the Owner may withhold from any payment otherwise due the Contractor so much as may be necessary to protect the Owner and if it so elects may also withhold any amounts due from the Contractor to any Subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the Owner and will not require the Owner to determine or adjust any claims or disputes between the Contractor and his Subcontractors or material dealers, or to withhold any monies for their protection unless the Owner elects to do so. The failure or refusal of the Owner to withhold any monies from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

d. Payments Subject to Submission of Certificates

Each payment to the Contractor by the Owner shall be made subject to submission by the Contractor of all written certifications required of him and his Sub-contractors by the Section entitled, CONTRACTOR'S CERTIFICATES under the GENERAL CONDITIONS.

112. CHANGES IN THE WORK

- a. The Owner may make changes in the work required to be performed by the Contractor under the Contract by making additions thereto, or by omitting work therefrom, without invalidating the Contract.
- b. Except for the purpose of affording protection against any emergency endangering life or property, the Contractor shall make no change in the materials used or in the specified manner of construction and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the Owner, authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract price will be valid unless so ordered.
- c. The Contractor agrees to perform any of the aforementioned changed work, along with all other required work found under the Contract, without delay and in accordance with good construction practices.
- d. These changes outlined above may be made without relieving or releasing the Contractor from any of his obligations under the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is provided otherwise.
- e. All adjustments to the Contract payment provisions will be made in accordance with the following paragraphs.
- f. If applicable unit prices are contained in the Agreement (established as a result of either a Unit Price Bid or a Supplemental Schedule of Unit Prices), the Owner may order the Contractor to proceed with desired changes in the work, the value of such changes to be determined by the measured quantities involved in the applicable unit prices specified in the Contract.
- g. If applicable unit prices are not contained in the Agreement, the Owner shall, before ordering the Contractor to proceed with desired changes, request an itemized proposal from him covering the work involved in the change after which the procedure shall be as follows:
 1. If the change in the work involves additional work, the procedure shall be as follows:
 - (a) If the proposal is acceptable, the Owner will prepare the Change Order in accordance therewith for acceptance by the Contractor; or
 - (b) If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the Owner may order the Contractor to proceed with the work on a Cost-Plus Basis. A Cost-Plus Basis is defined as the net cost of the work to the Contractor plus an allowance to cover overhead and profit as stipulated below:

"Net cost of the work" is defined as (1) gross cost of labor plus (2) net cost of materials plus (3) gross cost of equipment.

- (1) "Gross cost of labor" is defined as the cost of labor plus fringe benefits.

"Cost of labor" is defined as the cost of required labor based on the prevailing rates established by the New York State Department of Labor and stated in the Contract Document. No part of any salary for employees above the grade of foreman, and having general supervision of this work, will be included in this item.

"Fringe benefits" are defined as all insurance's, taxes and other benefits for the employee required by law or by union contract. The actual value of such fringe benefits shall be as listed in the New York State Department of Labor for each individual employee used in the work.

- (2) "Net cost of materials" shall be defined as the cost of all materials incorporated in the work, including delivery charges, less any allowable cash discounts, as shown by receipted bills.

- (3) "Gross cost of equipment" is defined as the "net cost of equipment" plus an escalation allowance from date of signing of the contract for increase in established cost of fuel and lubricants in the work area.

"Net cost of equipment" shall be defined as a rental rate, which is reasonable and based on rental rates prevailing in the area where the work is to be done. Such rental rate shall be based on the rates published in the "Rental Rate Blue Book" and shall be agreed upon in writing before the work is begun.

The cost of furnishing small tools and accessories and materials used for construction but not incorporated in the work shall be considered as part of the Contractor's overhead, and shall not be included in the "net cost of the work".

The Contractor must provide a certified copy of payroll on a monthly basis.

An allowance of 20% will be added for overhead and profit to "gross cost of labor" and "Net Cost of Materials" and is hereby stipulated to be in lieu of an actual determination of overhead and profit. The Contractor in submitting his bid agrees that this allowance shall be used, regardless of whether actual overhead and profit is more or less than this amount.

No percentage for overhead and profit shall be added to the amounts of equipment rental prices agreed upon, but the price agreed upon shall be the total compensation allows for use of such equipment.

2. If the change in the work requires a reduction in the work involved, the procedure shall be as follows:
- (a) If the proposal is acceptable, the Owner will prepare the Change Order in accordance therewith for acceptance by the Contractor; or
 - (b) If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the Engineer shall fix the cost value of the credit. The Owner may then order the Contractor to proceed with the work. Should the Contractor disagree with the cost value of the credit as fixed by the Engineer, he may appeal

the same in accordance with the procedures outlined in the GENERAL CONDITIONS.

- h. Each Change Order shall include in its final form:
 - 1. A detailed description of the change in the work.
 - 2. The Contractor's proposal (if any) or a confirmed copy thereof.
 - 3. Definite statements as to the resulting change in the Contract price and/or time.
 - 4. The statement that the Change Order is subject to the approval of the Owner.
- i. Any error or discrepancy in or between any of the Contract Documents shall be immediately reported to the Engineer who shall make such corrections and interpretations as may be deemed necessary for the completion of the work in a satisfactory and acceptable manner.
- j. Change Orders shall in general be in writing. If a Contractor claims that a change order was given to him orally, his claim shall be invalid unless such oral change order was given by an authorized Engineer as defined in Section 101.f of this Contract, and further unless such oral change order was confirmed in writing within 24 hours of the giving of the alleged oral change order.
- k. When change orders, or claims involve a subcontractor, no surcharge will be allowed the Contractor for handling, processing, supervision, or coordination.

113. CLAIMS FOR EXTRA COST

- a. All claims between parties, including all claims for additional compensation and/or additional time, arising out of, or in any way related to this Contract and/or the performance of the same, or its interpretation shall within ten (10) days of the event or action giving rise to the claim be presented to the Engineer. All papers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim but shall state the facts surrounding the claim in sufficient detail to identify the claim, together with its character and scope. In the meantime, the Contractor shall proceed with the work as directed. Any claim not presented within the time limit specified in this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days prior to the receipt by the Engineer of notice thereof. The Contractor shall in no case allow any claim or dispute to delay the work.
- b. As soon as practicable after the final submission of all information the Owner shall make a determination of any claim. Said decision of the Owner shall be a condition precedent to any further action on the claim. However, upon certification in writing by the claimant the Owner shall be obliged to render a decision on said claim within sixty (60) days of the date of said certification. Should the Owner fail to render its decision within the aforementioned sixty-(60) day period, its decision will not be a condition precedent to any further action on the part of the claimant.
- c. There shall be no added compensation paid for delay to the Contractor unless the Owner causes said delay by a material breach of this Contract, and compliance with the foregoing notice provisions shall be a condition precedent to the prosecution of any such claim. In any claim for delay except for "Excusable Delays and Extensions of Time" as defined in the GENERAL CONDITIONS SECTION "TERMINATION"; "DELAYS AND

EXTENSIONS"; "LIQUIDATED DAMAGES" wherein it is alleged that the Contractor's equipment was caused to remain idle, only one half of the prevailing rental rates for use of said equipment will be considered as damages for idled equipment in order to allow for the absence of fair wear and tear, which is allowed for in prevailing rental rates for equipment usage.

- d. Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be considered unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.
- e. If, on the basis of the available evidence, the Owner determines that an adjustment of the Contract Price and/or Time is justifiable, the procedure shall be as provided in Sections - "CHANGES IN THE WORK" or "TERMINATIONS; DELAYS AND EXTENSIONS; LIQUIDATED DAMAGES" of the GENERAL CONDITIONS.
- f. In the event of an unfavorable decision by the Owner, the Contractor shall have the right to contest said decision as provided for under the provisions of this Contract.

114. NO OPTIONS PAID

It shall be clearly understood that there will be no payment for materials incorporated into the work (other than that shown on the Contract Drawings or specified) unless ordered by the Engineer.

115. TIME AND MATERIALS WORK NOTIFICATION

Should the Contractor perform work in accordance with the General Conditions, "CHANGES IN THE WORK", he shall give a minimum of 24 hours advance written notice prior to his anticipated beginning any work on a Cost-Plus Basis, to the Owner.

116. TERMINATION; DELAYS AND EXTENSIONS; LIQUIDATED DAMAGES

- a. Termination of Contract for Convenience: For its own convenience the Owner may, at any time prior to the issuance of a Notice to Proceed, void the Contract by giving unequivocal and unconditional written notice of such avoidance to the Contractor and in the event of such avoidance the Owner will not be liable to the Contractor for any claims or losses, including anticipation of performance under the Contract.

At any time subsequent to the Notice to Proceed the Owner, may at its own convenience, terminate the Contract by giving unequivocal and unconditional written notice of such termination to the Contractor. In the event of such termination by the Owner, the Owner shall be responsible to the Contractor for the following monies only, which monies shall be subject to legitimate changes of the Owner against the Contractor:

- 1. All reasonable costs incurred by the Contractor in performance of or in anticipation of performance of the Contract provided the Contractor shall take all reasonable steps to mitigate such damages including the return and/or resale of materials ordered; and
- 2. On Lump Sum projects, a mark-up of 10% for profit and 10% for overhead on the reasonable cost of the work that is completed and in place in accordance with the Contract Drawings and Specifications will be allowed. On unit price contracts,

allowances for profit and overhead shall be considered to have been included in each of the Contractor's original unit prices bid. The Contractor shall remain responsible for the work completed, in accordance with the Contract provisions.

Should any work under this contract be subject to, or terminated by the action of any third party, governmental unit or court due to any ecological or other reason the rights of the Contractor to recover from the Owner shall be determined as set forth above.

b. Termination of Contract for Cause: In addition, the Owner may give notice in writing to the Contractor and his Surety of any material breach of the Contract by the Contractor to include but not be limited to any of the following:

1. Failure to begin the work under the Contract within the time specified.
2. Failure to perform the work with sufficient workmen, equipment or materials to insure the prompt completion of said work.
3. Unsuitable performance of the work or failure to perform anew such work as shall be rejected as defective and unsuitable.
4. Neglecting or refusing to remove material rejected as defective and unsuitable.
5. Discontinuing the suitable prosecution of the work for a period of 72 hours, excluding Sundays and holidays without written authorization of the Engineer.
6. Failure to commence discontinued work within 48 hours after notice to resume (excluding Sundays and holidays).
7. Becoming insolvent or declared bankrupt, or commits any act of bankruptcy or insolvency.
8. Allowing any final judgment to stand against him unsatisfied for a period of ten (10) calendar days.
9. Making any assignment for the benefit of creditors.
10. Violating any covenants contained in the Contract Documents.
11. Failure to eliminate unsafe conditions within 12 hours.

The Contractor or Surety within a period of ten (10) calendar days after such notice shall take all practical action to correct said material breach. Should said action fail to meet with the approval of the Owner, the Owner, may at its discretion, order the Surety to complete the work or, without violating the Contract, take the prosecution of the work out of the hands of said Contractor and Surety.

The Owner may appropriate or use any or all materials and equipment on the ground as may be suitable and acceptable and may enter into an agreement, either by negotiation or public letting, for the completion of said Contract according to the terms and provisions thereof, or use such other methods or combinations thereof, as in its opinion shall be required or desirable for the completion of said Contract in an acceptable manner. All costs and charges incurred by the Owner together with the cost of completing the work under Contract shall be deducted from monies due or which may become due said Contractor. In case such expense shall exceed the

sum which would have been payable under the Contract, then the Contractor and the Surety shall be liable and shall pay to the Owner the amount of said excess.

- c. Excusable Delays and Extensions of Time. The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due:

1. To any acts of the Government, including controls or requisitioning of materials, equipment, tools, or by labor by reason of war, National Defense, or any other national emergency.
2. To any acts of the Owner caused by an injunction or litigation against said Owner, by a third party.
3. To causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in performance of some other Contract with the Owner, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions; and
4. To any delay of any Subcontractor occasioned by any of the causes specified in subparagraphs 1, 2 and 3 of this paragraph "c".

Provided, however, that the Contractor promptly notify the Owner within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the Owner shall ascertain the facts and the cause and the extent of delay. If, upon the basis of the facts and the terms of this Contract, the delay is properly excusable, the Owner shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

No claim for damages or any claim other than for an extension of time as herein provided shall be made or asserted against the Owner by reason of any delay.

- d. Liquidated Damages for Delay. If the work is not completed within the time stipulated in Section - TIME OF COMPLETION under SPECIAL CONDITIONS, including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the Owner as fixed agreed, and as liquidated damages (it being impossible to determine the actual damages occasioned by the delay) for each calendar day of delay, until the work is completed, the amount as set forth in Section - LIQUIDATED DAMAGES under SPECIAL CONDITIONS and the Contractor and his sureties shall be liable to the Owner for the amount thereof. Neither permission given by the Owner for the Contractor to continue the work after the time fixed for completion, nor the inspection and acceptance of such work, shall be deemed a waiver on the part of the Owner of any of his rights under this Contract.

117. ENGINEER'S AUTHORITY

The Engineer will decide all questions, which may arise in the relation to the work and the construction thereof. The Engineer's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said Contract, the determination or decision of the Engineer shall be a condition

precedent to the right of the Contractor to receive any money or payment for work under this Contract affected in any manner or to any extent by such question.

118. TECHNICAL SPECIFICATIONS AND CONTRACT DRAWINGS

Anything mentioned in the Technical Specifications and not shown on the Contract Drawings and not mentioned in the Technical Specifications shall be of like effect as if shown on or mentioned in both. In case of difference between the Contract Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy within the Contract Drawings or within the Technical specifications, the matter shall be immediately submitted to the Owner without whose decision said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

119. REQUESTS FOR SUPPLEMENTARY INFORMATION

It shall be the responsibility of the Contractor to make timely request of the Owner for any additional information not already in his possession which should be furnished by the Owner under the terms of this Contract, and which he will require in the planning and execution of the work. Such requests may be submitted from time to time as the need is approached, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and latest date by which each will be required by the Contractor. The first list shall be submitted within two (2) weeks after Contract award and shall be as complete as possible at that time. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provisions of this Section.

120. SHOP DRAWINGS

Shop drawings are required for all manufactured items. In the case of reinforced concrete, details of reinforcing bars and form construction and materials shall be submitted in the same manner as shop drawings.

- a. All required shop drawings, machinery details, layout drawings, working drawings, material and equipment descriptions, etc., shall be submitted to the Engineer in three (3) copies for review sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking if necessary. THE CONTRACTOR SHALL SIGN AND APPROVE ALL SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE ENGINEER. Two (2) weeks should be allowed for checking from the date of receipt by the Engineer. The Contractor, with the approval of the Engineer, may submit manufacturer's literature as a substitute for, or supplement to, the shop drawings, etc. The minimum size for any submission shall be 8 1/2" x 11 and the maximum size shall be 24" x 36".
- b. No construction, purchases, delivery, installation or work shall be done or made on any part or feature of this Contract which is dependent upon shop drawing review, until such review has been received from the Engineer. If the Contractor proceeds without reviewed shop drawings, it shall be at his own risk. No claim by the Contractor, for extension of the Contract time will be granted by reason of his failure in this respect.
- c. Shop drawings, etc., or printed matter shall give all dimensions, sizes, etc., to enable the Engineer to determine suitability of the construction, installation, material or layout for the purposes intended. Where needed for clarity, the drawings shall include outline, sectional

views and detailed working dimensions and designations of the kind of material, machine work, finish, etc., required. The drawings to be submitted shall be coordinated by the Contractor with any other drawings previously reviewed, with the design and function of any equipment or structure and the Contract Drawings.

- d. By submitting shop drawings, etc., the Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so and that he has checked and coordinated each shop drawing, etc., with the requirements of the work and of the Contract Documents.
- e. If any drawings show variations from the requirements of the Contract because of standard shop practice and or other reasons, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of the contract price and/or time; otherwise, the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been reviewed.
- f. After review, the submittals will be stamped "Approved", "Approved as Noted", "Resubmit" or "Disapproved". Two (2) prints of "Approved" or "Approved as Noted" drawings will be returned to the Contractor for his use and distribution to his suppliers and/or Subcontractors. In the case of those stamped "Resubmit" or "Disapproved" two (2) prints will be returned to the Contractor who shall make all indicated corrections and resubmit (3) prints.
- g. In any submission that is noted as "Approved" or "Approved as Noted", the review shall not extend to details or dimensions and shall not relieve the Contractor from his responsibility for compliance with the Contract Drawings and specifications.
- h. When the Contractor proposes a revision to a previously submitted shop drawing, etc., three (3) copies shall be resubmitted for review. This re-submittal shall clearly indicate, in a revision block, the date, description and location of the revision. The letter of transmittal shall state the reasons for the revision.
- i. The contractor shall furnish as many copies of the submittals as is necessary for the proper coordination of the work, and shall maintain a complete set of the reviewed submissions at the site of the work at all times.
- j. Upon the final acceptance of the project, the Contractor shall, on request, furnish the Owner with a complete set of shop drawing tracings or reproducible cloth reproductions of the shop drawing tracings.
- k. There will be no direct payment made for any of the above submittals, or reproducible drawings if required, but the cost thereof shall be considered as included in the general cost of the work.

121. SAMPLES, CERTIFICATES AND TESTS

The Contractor shall submit all samples, materials, certified test reports, materials certificates, certificates of compliance, affidavits, etc., as called for in the Contract Documents or required by the Engineer, promptly after award of the Contract and acceptance of the Contractor's bonds. No such materials and/or equipment, etc., shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples/certificates/tests/etc., have been approved in writing by the Owner. Any delay in the work caused by late or improper submission of the above for approval shall not be considered just cause for an extension of the Contract time.

- a. **Samples.** Unless otherwise specified, the Contractor shall furnish the required samples without charge, and shall provide every facility for the securing of material samples. He shall provide means and assist in the verification of all scales, measures and other devices, which he operates. Samples to be submitted shall be taken by the Engineer or a laboratory approved by the Owner, unless otherwise specified. All materials being used shall be subject to re-sampling and testing at any time during their preparation and/or use.

All samples submitted by the Contractor shall be properly identified to include, but not be limited to, the project name, project number, item number and description of material, name of the producer, place of origin, and other detailed information which will assist the Engineer passing upon the acceptability of the sample. Certified test reports, materials certificates and/or certificates of compliance required to be submitted with the samples or if permitted in lieu of samples, shall conform to the requirements stated hereafter.

- b. **Certified Test Report.** A certified test report shall be a document containing a list of the dimensional, chemical, metallurgical, electrical and physical results obtained from an actual test of the materials involved, and shall certify that the materials meet the requirements of the Contract drawings and specifications, and shall also include the following information:

1. Item number and description of material;
2. Date of manufacture;
3. Date of testing;
4. Name or organization to whom the material is consigned.
5. Quantity of material represented, such as batch, lot, group, etc.;
6. Means of identifying the consignment, such as label, marking, lot number, etc.;
7. Date and method of shipment;
8. Name of organization performing tests.

The certified test report shall be signed by an authorized and responsible agent for the organization manufacturing the material, and it shall be notarized.

- c. **Materials Certificate.** A materials certificate shall be a document certifying that the materials, components and equipment furnished, conform to all requirements of the Contract Drawings and specifications. The document shall also include the following information:

1. Project to which the material is consigned.
2. Name of Contractor to whom material is supplied.
3. Item number and description of material.
4. Quantity of material represented by the certificate.
5. Means of identifying the consignment, such as label, marking, lot numbers, etc.
6. Date and method of shipment.

The materials certificate shall be signed by an authorized and responsible agent for the organization supplying the material, and it shall be notarized.

- d. **Certificate of Compliance.** A certificate of compliance shall be a document certifying that the materials, components and equipment covered by the previously submitted certified test report and materials certificate, have been installed in the work and that conform to all the requirements of the Contract Drawings and specifications. The following information shall also be required on the document:

1. Project number;
2. Item number and description of material;
3. Quantity represented by the certificate;
4. Name of manufacturer.

The certificate of compliance shall be signed by an authorized responsible agent for the prime Contractor, and shall be notarized.

- e. **Tests.** Tests as required by the Specifications will be made in accordance with the latest revision to the standard method in effect at the time of bidding of the American Society of Testing Materials, the New York State Dept. of Transportation, the American Water Works Association, the American Association of State Highway and Transportation Officials or any other organization that is recognized as an authority on a particular material unless otherwise specified on the Contract Drawings or Special Conditions. Representative preliminary samples of the material proposed for use shall be submitted, without charge, by the Contractor or producer for examination and tested in accordance with specified methods. All materials being used are subject to test or rejection at any time during their preparation and use.

The Engineer will reject materials whenever, in his judgment, they fail to meet the requirements of the specifications.

The Owner reserves the right to re-test all materials, which have been tested and accepted at the source of supply. After the same have been delivered, and to reject all materials which, when re-tested, do not meet the requirements of the specifications.

- f. **Approval/Acceptance.** Approval of any materials shall be general only and shall not constitute a waiver of the Owner's right to demand full compliance with Contract Requirements. After actual deliveries, the Engineer will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.

The Engineer may accept a material or combination of materials and, therefore, waive non-complying test results provided that all of the following conditions are met:

1. Results of prior and subsequent series of tests of the material or material from the same sources are found satisfactory.

2. The incidence and degree of nonconformance with the specification requirements are, in the Engineer's judgment, within reasonable and practical limits.
3. The Contractor has diligently exercised material controls consistent with good practices in the Engineer's judgment.
4. No adverse effect on the value or serviceability of the completed work could result.

The Engineer may at his discretion waive testing of extremely minor quantities of material when such material is obtained from sources that are prevalently on test.

- g. Costs. Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:
 1. The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, including those samples taken on the project by the Engineer. The Owner shall pay all other testing costs of said samples.
 2. The Contractor shall assume all costs of re-testing materials, which fail to meet Contract requirements.
 3. The Contractor shall assume all costs of testing materials offered in substitution for those found deficient or for those specified.

122. MATERIALS AND WORKMANSHIP

- a. Unless otherwise specifically provided for in the Technical Specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the Technical Specifications as "equal to" any particular standard, the Engineer shall decide the question of equality.
- b. All work performed and all materials furnished shall be, in conformity with the lines, grades, cross sections, dimensions and material requirements, including tolerances shown on the Contract Drawings or indicated in the Specifications.
- c. The Contractor shall furnish to the Owner for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics and all other pertinent information as required, and shall likewise submit for approval as required full information concerning all other materials or articles which he proposes to incorporate in the work. See Section - SAMPLES, CERTIFICATES AND TESTS.
- d. Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- e. Materials specified by reference to the number or symbol of a specific standard, such as an ASTM Standard, a Federal Specification or other similar standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to type, class or grade, or modified in such reference. The standards referred to, except as modified in the Technical Specifications, shall have full force and effect as though printed therein.

- f. The Contractor shall employ only competent and skillful men to do the work and whenever the Engineer shall notify the Contractor, in writing, that any man on the work is, in his opinion, incompetent or disorderly, the Contractor shall forthwith remove such person and shall not again employ him on any part of the work without the written consent of the Engineer.
- g. The Owner may stop any worker, any part of the work under the Contract if the methods or conditions are such that unsatisfactory work might result, if improper materials or workmanship is being used, or unsafe conditions exist. Any action by the Owner under this provision shall not be deemed a cause of delay and no extensions of permitted time will be granted because of such action.
- h. In the event the materials furnished or the work performed deviates from the requirements of the Contract Drawings and Specifications, but, in the opinion of the Owner, constitutes substantial performance, the Owner may accept the same. Should the deviation in question result in a savings to the Contractor the Owner will be entitled to a credit in the full amount of said savings. Should the deviation in question result in an additional cost to the Contractor, the Owner will not be liable to the Contractor for such additional cost.

If the materials or the finished product in which the materials are used or the work performed are not in conformity with the Contract Drawings and Specifications and have resulted in an inferior or unsatisfactory product, the work and materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.

123. PERMITS AND CODES

- a. The Contractor shall give all notices required by and shall observe and comply with all Federal and State laws and Local by-laws, ordinances and regulations in any manner affecting the conduct of the work, and all such orders or decrees as may exist at present and those which may be enacted later, of bodies or tribunals having any jurisdiction or authority over the work. The Contractor shall indemnify and save harmless the Owner and Engineer and all of its officers, agents and servants against any claim or liability arising from or based on the violation of any such law, bylaw, ordinance, regulation, order or decree, whether by himself or his employees. All construction, work and/or utility installations shall comply with all applicable ordinances and/or codes including any and all written waivers thereto.

Before commencing any work, the Contractor shall examine the Contract Drawings and Specifications for compliance with applicable ordinances, codes, etc. and shall immediately report any discrepancy to the Owner. Where the requirements of the Contract Drawings and Specifications fail to comply with such applicable ordinances, codes, etc., the Owner will adjust the Contract by Change Order to conform to such ordinances, codes, etc., (unless waivers in writing covering the differences have been granted by the governing body or department) and make appropriate adjustment in the Contract Price.

Should the Contractor fail to observe the foregoing provisions and proceed with the construction or work and/or install any utility at variance with any applicable ordinance, code, etc., including any written waivers (notwithstanding the fact that such installation is in compliance with the Contract Drawings and Specifications), the Contractor shall remove such work without cost to the Owner, but a Change Order will be issued to cover only the excess cost the Contractor would have been entitled to receive if the change had been made before the Contractor commenced work on the items involved.

- b. Unless otherwise specified, the Contractor shall at his own expense, secure and pay to the appropriate department of the Local/State/Federal Government the fees or charges for all permits including but not limited to those required for the making of water taps and the supplying of any equipment required by the regulations of the water district or company, Electrical Underwriters permits, and any other permits required by the regulatory body or any of its agencies.
- c. The Contractor shall comply with applicable Local/State/Federal laws, ordinances, codes, etc., governing noise, the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the work under this Contract.

124. CARE OF WORK

- a. The Contractor shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Owner.

Materials shall be stored so as to insure the preservation of their quality and fitness for the work and shall be located so as to facilitate prompt inspection. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces and not on the ground, and when directed, shall be placed in weatherproof buildings.

Stored materials, even though approved before storage, shall be inspected prior to their use in the work and shall meet the requirements of the specifications at the time it is proposed to use them.

- b. The Contractor shall at his sole expense and without any additional cost to the Owner provide watchmen and/or other security measures as may be reasonably required to properly protect and care for materials and work completed, and to otherwise prevent property damage and/or personal injury.
- c. In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization from the Owner, is authorized to act at his discretion to prevent such threatened loss or injury, and he shall so act. He shall likewise act if instructed to do so by the Owner. Any compensation claimed by the Contractor on account of such emergency work will be reviewed by the Owner to determine its validity. If compensation is determined to be valid, then it will be determined by the Owner as provided in the Section -CHANGES IN THE WORK under GENERAL CONDITIONS.
- d. The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations. If any damage is not repaired or acceptable arrangements for repair are not made within a reasonable period of time, the Owner may act to repair such damage by utilizing its own forces or using another contractor employed for that purpose, and the costs of such repair shall be deducted from any payments due the Contractor. If a damage claim has been referred by the Contractor to his insurance company, such referral shall in no way relieve the Contractor of his responsibilities.
- e. The Contractor shall shore-up, brace, underpin, secure and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of

the site, which may be in any way affected by the excavations or other operations connected with the construction of this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Owner and the Engineer from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Owner and the Engineer may become liable in consequence of such injury or damage to the work or adjoining and adjacent structures and/or their premises.

125. ACCIDENT PREVENTION

- a. The Contractor shall exercise proper precautions and safety measures at all times for the protection of persons and/or property and shall be responsible for all injuries and/or damages to all persons and/or property, either on or off the site, which occur as a result of his prosecution of the work under this Contract. The safety provisions of all applicable Local/State/Federal laws and building and construction codes shall be observed and the Contractor shall take or cause to be taken such additional safety and health measures as the Owner may determine to be reasonably necessary.

Machinery, equipment and trucks shall be properly guarded, and operational hazards shall be eliminated in accordance with the provisions and intent of the latest rules and regulations of OSHA, to the extent that such provisions are not in contravention of applicable law. The Contractor's attention is also called to the Section - SAFETY PROVISIONS of the GENERAL CONDITIONS.

- b. The Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment of the work under this Contract in accordance with the requirements of the applicable State/Local/Federal regulations. The Contractor shall promptly furnish the Owner with reports concerning these matters.
- c. The Contractor shall indemnify and save harmless the Owner, AI Engineers, Inc., Dolph Rotfeld Engineering Division, 570 Taxter Road, Elmsford, NY 10523, (the Engineer) and their consultants from any and all claims for damages resulting from personal injury, death and/or property damage, suffered or alleged to have been suffered, by any person as a result of any work conducted under this Contract. See also the Section INDEMNITY CLAUSE of the GENERAL CONDITIONS.

126. USE OF PREMISES

- a. The Contractor shall confine his equipment, storage of materials, and construction operations to the Contract Limits as shown on the Drawings and as prescribed by ordinances or permits, or as may be desired by the Owner, and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.
- b. The Contractor shall comply with all instructions of the Owner, Engineer and the ordinances, codes, etc., of the Local/State/Federal Government, regarding signs, advertising, traffic, fires, explosives, danger signals, barricades, etc.

127. REMOVAL OF DEBRIS, CLEANING, ETC.

The Contractor shall, periodically or as directed during the progress of the work, keep the Project Area and public rights of way reasonably clear. Upon completion of the work, prior to final

inspection, he shall remove all temporary construction facilities, debris and unused materials provided for the work, and restore the whole site of the work to a condition satisfactory to the Engineer. The cost of all required clean-up shall be included in the various prices bid under this Contract.

128. LAYOUT OF WORK

The Contractor shall perform all layout work necessary for the satisfactory execution of the construction as shown on the Contract Drawings and all costs in connection therewith shall be included in the contract price.

The Contractor shall employ competent personnel and all work shall be subject to the approval of the Engineer.

The Contractor shall be held responsible for the protecting and safeguarding of all control points and bench marks set by the Engineer and his own forces. Any replacement or re-establishment of control points or benchmarks by the Engineer shall be at the expense of the Contractor.

The required horizontal and vertical control necessary to perform this work is furnished on the Contract Drawings.

129. INSPECTION/ACCEPTANCE OF THE WORK

All materials and workmanship shall be subject to inspection, examination or test by the Owner and the Engineer to determine the acceptability of the work at any and all times during manufacture or construction and at any and all places where such manufacture or construction is carried on and the Contractor shall provide proper facilities for such access and inspection. The Owner or Engineer shall have the right to reject defective material and workmanship or require its correction. The Owner or Engineer shall have the right to reject materials, which have not been approved prior to incorporation in the work, and the right to reject work that has been performed without inspection. Rejected materials shall be removed and replaced without charge. Rejected workmanship shall be corrected if possible to the Engineer's satisfaction without additional charge. If in the opinion of the Engineer correction is not feasible, or if correction has been attempted but is not satisfactory to the Engineer, the work must be removed and replaced without additional charge. If the Contractor fails to proceed at once with the correction or replacement of rejected workmanship or defective material, the Owner may by contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any monies which are due or may become due the Contractor, without prejudice to any rights or remedies of the Owner.

Neither inspection, testing, approval nor acceptance of the work in whole or in part by the Owner or its agents shall relieve the Contractor or his sureties of the full responsibility for materials furnished or work performed not in strict accordance with the Contract.

The assignment of a part-time or full-time inspector to this project will in no way relieve the Contractor of the requirement to comply with all of the specifications.

Where the Contractor has been directed by the Owner or Engineer to leave certain items of work exposed for inspection, and he fails to do so, he will be required to uncover such work, at his own expense.

130. FINAL INSPECTION

When the improvements embraced in this Contract are substantially completed, The Contractor shall notify the Owner in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The notice will be given at least ten (10) days prior to the date stated for final inspection, and bear the signed concurrence of the representative of the Owner having charge of inspection. If the Owner determines that the status of the improvements is as represented, he will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable. The inspection party may also include the representative of the Village of Dobbs Ferry having charge of improvements of like character when such improvements are later to be accepted by the Village.

131. INSURANCE

The insurance requirements for this contract are specified in the Insurance Section of this document.

132. WARRANTY OF TITLE

No material, supplies or equipment, incorporated or to be incorporated in the work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the Owner free from any claims, liens or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance thereon. Nothing contained in this paragraph, however, shall defeat or impair the right of person furnishing materials or labor to recover under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

133. GENERAL GUARANTEE

Neither the final certificate of payment nor any provisions in the Contract nor partial or entire use of the improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials and workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final payment.

134. NO ARBITRATION

All claims, counterclaims, disputes and other matters in question between the Owner and the Contractor, not otherwise resolved, arising out of or relating to this agreement or its breach shall be decided in a court of competent jurisdiction. The Owner and the Contractor hereby agree that there shall be no requirement for arbitration of any controversies or disputes hereunder, all such matters to be resolved at law.

135. RISK OF LOSS

The Owner assumes no responsibility for the condition of existing buildings and structures and other property on the Project Area not for their continuance in the condition existing at the time of issuance of the Invitation for Bids or thereafter. No adjustment of Contract Price or allowance for any change in conditions which may occur after the Invitation for Bids has been issued will be made except as provided for herein.

136. REQUIRED PROVISIONS 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 be read and 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 forthwith be physically amended to make such insertion or correction.

137. CORRECTIONS

The Engineer shall have the right to correct any errors or omissions in the Contract, specifications or Contract Drawings when such corrections are necessary for the proper expression of their intent.

Such corrections shall take effect from the time that the Engineer gives notice thereof, and any alterations in the work rendered necessary thereby shall be made as corrected. Any conflict between the approved Contract Drawings and specifications, or any disagreement in measurements upon the Contract Drawings must be submitted to the Engineer before construction of the work.

138. SAFETY PROVISIONS

The safety provisions of applicable laws, building and construction codes and the safety codes approved by the Owner shall be observed.

The provisions of the Federal Occupational Safety and Health Administration's "Occupational Safety and Health Standards" and "Safety and Health Regulations for Construction" shall be observed.

Should at any time during the work under this Contract any Local/State/Federal safety inspector visit the site for the purpose of a safety inspection, the Contractor shall immediately notify the Engineer's representative on the job site.

139. CONNECTING TO EXISTING WORK

The Contractor shall remove such existing masonry, concrete, equipment and piping as is necessary, in order to make the proper connections to the existing work at the locations shown. Also, he shall make the necessary pipe line, roadway and other connections at the several points in order than on completion of this Contract, water, sewage, or storm water, as the case may be, will flow through the several pipe lines and structures. Unless otherwise specified herein, no extra payment will be made for this work, but the entire cost of the same shall be included in the unit or lump sum prices bid for the various items of the work to be done under this Contract.

140. EXISTING IMPROVEMENTS

The Contractor shall conduct his work so as to minimize damage to existing improvements, except where specifically stated otherwise in the specifications or drawings; it will be the responsibility of the Contractor to restore, as nearly as practical, to their original conditions all improvements on public or private property damaged by his operations.

141. ACCESS TO SITE

All costs of the removal and restoration to original condition of walls, fences, structures, utility lines, poles, guy wires and anchors, and other improvements required for passage of the Contractor's equipment shall be borne by the Contractor. The Contractor shall notify the proper authorities of the Village of Dobbs Ferry and the Owner and all utilities of any intended modification or disruption to their property prior to the start of construction and shall cooperate with them in the scheduling and performance of his operation.

The Contractor shall be responsible for and reimburse the Owner and others for any and all losses, damage or expense which the Owner and/or Local Government or those others may suffer, either directly or indirectly or through any claims of any person or party, for any trespass outside the spaces provided by the Owner to the Contractor or any violation or disregard of the terms and conditions established for the use or occupancy of those rights or for negligence in the exercise of those rights.

The Owner may retain or deduct from any sum or sums due or to become due to the Contractor such amount or amounts as may be proper to insure the Owner against loss or expense by reason of the failure of the Contractor to observe the limits and conditions of the rights-of-way, rights-of-access, etc., provided by the Owner.

142. INDEMNITY CLAUSE

The Contractor shall sign and be held to Indemnification Agreement in Section D of this document.

143. DISPUTES

- a. All disputes arising between the parties arising out of, or in any way related to this Contract and/or the performance of the same, or its interpretation, shall within ten (10) days of the event or action giving rise to the dispute be presented to the Engineer. All papers pertaining to the dispute shall be filed in quadruplicate. Such notice shall state the facts surrounding the dispute in sufficient detail to identify the dispute, together with its character and scope. In the meantime, the Contractor shall proceed with the work under this Contract as directed. Any dispute not presented within the time limit specified in this paragraph shall be deemed to have been waived, except that if the dispute is of a continuing character and notice of the dispute is not given within ten (10) days of its commencement, the dispute will be considered only for a period commencing ten (10) days prior to the receipt by the Engineer of notice thereof. The Contractor shall in no case allow any dispute to delay the work under this Contract.
- b. As soon as practicable after the final submission of all information the Owner shall make a determination of the dispute. Said decision of the Owner shall be a condition precedent to any further action on the dispute. However, upon certification in writing by the claimant that the dispute has been submitted in its final form the Owner shall be obliged to render a decision on said dispute within sixty (60) days of the date of said certification. Should the

Owner fail to render its decision within the aforementioned sixty- (60) day period, its decision will not be a condition precedent to any further action on the part of the claimant.

- c. Each decision by the Owner will be in writing and will be mailed to the Contractor by registered or certified mail, return receipt requested, directed to his last known address.
- d. In the event of an unfavorable decision by the Owner, the Contractor shall have the right to contest said decision as provided for under the provisions of this Contract. The Contractor shall in no case allow the dispute or decision to delay any work but shall notify the Owner promptly that he is proceeding with the work under protest and he may then except the matter in question from the final release.

144. "OR EQUAL" CLAUSE, UNLESS OTHERWISE SPECIFIED:

Whenever a material, article or piece of equipment other than the pumps and VSD units, is identified on the Contract Drawings or in the specifications by reference to manufacturers' or vendors' names, trade names, catalog numbers, etc., the intent is to establish a standard. Any material, article, or equipment of other manufacturers and vendors of equally high quality (particularly with regard to points specified in the specifications) which will perform equivalently within the design ranges specified will be equally acceptable provided that the material, article or equipment so proposed is, in the opinion of the Engineer, of equal substance and function. Further the manufacturer must agree to comply fully with the warranty requirements of the specifications. The Contractor may not assume that the Engineer will approve substitute equipment and non-approval of said equipment will form no basis for a claim for additional compensation by the Contractor. No substitute equipment shall be purchased or installed by the Contractor without the Engineer's written approval. If the Engineer's approval is obtained for alternate equipment, the Contractor shall, at his own expense, make any changes in the structures, building, piping or electrical necessary to accommodate the equipment and if engineering is required due to substitution of other material the Contractor shall reimburse the owner for the engineering service. The Contractor must pay for any laboratory testing required to establish the equality of his proposal.

145. CONSTRUCTION, EXCAVATION AND DEMOLITION OPERATIONS AT OR NEAR UNDERGROUND FACILITIES

The Contractor's attention is directed to the State of New York, Department of Labor, Board of Standards and Appeals Industrial Code Rule 753 - "Construction, Excavation and Demolition Operations at or near Underground Facilities" effective April 1, 1975 and any amendments thereto.

The Contractor will be required to comply with all applicable requirements of Industrial Code Rule 53.

Requests for copies by mail should be directed to the State of New York, Department of Labor, Office of Public Information, State Office Building Campus, Albany, New York 12201; or, single copies may be obtained by applying in person at the Department's office in Albany or in New York City at the Department of Labor, Two World Trade Center, New York, New York 10047.

146. REVIEW BY OWNER

The Owner, its authorized representatives and agents shall, at all times have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices and other relevant data and records pertaining to this

Contract, provided, however, that all instructions and approval with respect to the work will be given to the Contractor only by the Owner through its authorized representatives or agents.

147. DEDUCTIONS FOR UNCORRECTED WORK

If the Owner deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the Owner and subject to settlement, in case of dispute, as herein provided.

148. PATENTS

The Contractor shall hold and save the Owner and Engineer, their officers, and employees, harmless from liability of any nature or kind, including but not limited to court costs and attorney's fees, for or on account of, any patented or unpatented invention, process, article or appliance manufactured or used in the performance of the Contract, which has been recommended by the Contractor, including its use by the Owner, unless otherwise specifically stipulated in the Technical Specifications.

149. INFORMATION FROM OWNER

In addition to showing the construction under this Contract, the drawings may show certain information obtained by the Owner regarding conditions and features, which exist at the site of the work, both at and below the surface of the ground. The Owner and the Engineer expressly disclaim any responsibility for the accuracy or completeness of the information given on the drawings with regard to the existing conditions and features and the Contractor will not be entitled to any extra compensation on account of inaccuracy or incompleteness of such information. The information, which is shown, is only for the convenience of the Contractor, who must verify this information to his own satisfaction.

150. EXISTING UTILITIES, STRUCTURES AND FIXTURES

The Contractor will be required, at no additional expense to the Owner, to do everything necessary to support, protect and sustain all sewer, water, gas mains or service pipes; electric light, power poles, telephone or telegraph poles, manholes, valve boxes, concrete gutters, guide rails conduits and any and all utilities, structures or fixtures laid across or along the site of the work. In case any of the said utilities, structures or fixtures are damaged by the Contractor, they shall be repaired by the Contractor at his own expense, or by the authorities having control of the same and the expense of said repairs shall be deducted from the monies due or to become due the Contractor under this Contract.

If the Contractor desires temporary changes of location for his convenience for any reason whatsoever, of water lines, gas lines, sewer lines, wire lines, service connections, water and gas meter boxes, valve boxes, light standards, cableways, signals and any other utilities, structures or fixtures, he shall satisfy the Engineer and Owner that the proposed relocation does not interfere with his or other Contractor's operations, or the requirements of the Contract Drawings and does not cause an obstruction or a hazard to traffic. The Contractor shall make his own request to the utility companies, pipe owners or other parties affected for such relocation work. Such relocation work for the convenience of the Contractor shall be made solely at the Contractor's expense.

The Contractor shall not remove or relocate any utility, structure or fixture without the written approval of the owner of that utility, structure or fixture unless otherwise shown on the Contract Drawings, specifications or ordered by the Engineer.

151. HOURS OF WORK

No work shall be done on the job before 8:00 a.m. nor after 5:00 p.m. unless the Owner is notified, nor shall any work be done on Saturdays, Sundays, or legal holidays unless Contractor shall have given Owner written request at least forty-eight (48) hours in advance. Owner will make no additional payment for overtime work under any circumstances unless the Engineer has given a prior written order. The Contractor shall comply with the any municipal Noise Ordinance.

152. EMERGENCY WORK

If in the opinion of the Owner the work is carried on in such fashion that the public safety, private property, or utilities are endangered, or that the work is carried on in such a manner as to create unnecessary inconvenience to the public, the Owner shall, immediately upon giving notice, be authorized to undertake such corrective measures as he may deem to be necessary. The cost of such work shall be deducted from payments due the Contractor under this contract.

153. PROTECTION

The Contractor shall protect and maintain all property, structures and utilities, public or private and shall provide whatever means are required to do so, as part of this contract

154. PAYMENT FOR GENERAL CONDITIONS

The cost of the performance of any work required by these General Conditions shall be considered to be a part of the Contractor's Base Bid if the contract is a Lump Sum Contract, and spread out among all the unit prices if the contract is a Unit Price Contract. There will be no additional payment for work required by these General Conditions.

155. DAMAGE TO PRIVATE PROPERTY

If the Contractor damages private property or facilities outside the designated work area (which work area is to be restored under the restoration provisions of the contract), he shall restore the private property or facilities promptly and completely in the same manner as specified under the restoration provisions of these specifications. If he does not do so within a reasonable period of time, as determined by the Owner, the Owner may retain or deduct from any sum or sums due to the Contractor such amount or amounts as are necessary to correct the condition and employ its own forces or another contractor to do the corrective work. The fact that the Contractor has referred damage claim to his insurance carrier shall not relieve him of liability for prompt and full restoration of damage. For purposes of this section of the contract, the Owner will treat what are essentially private facilities within a public right-of-way (including but not limited to mailboxes, shrubs, flowers and other plantings, walls, light poles, etc.) in the same manner as described above for private property.

156. RESTORATION

All man-made and natural features in the construction site disturbed or removed for the proper completion of the work shall be reset or replaced. All man-made or natural features damaged or destroyed shall be repaired or restored to a condition equal to or better than that existing at the start of the work, with materials equal to or better than the original ones.

In cases where it is impossible to replace an item with an equivalent item the Contractor may, subject to the approval of the Engineer, substitute other similar items whose total value shall equal that of the destroyed one.

If the contract documents contain more detailed or more stringent specifications for restoration than in this section, the more detailed or stringent specifications shall take precedence over this section. If the contract documents do not contain detailed specifications for restoration, then this section expresses the intent of the Owner; all published specifications of the Owner containing details of construction applicable to items of restoration (e.g. grass, pavement, etc.) shall be deemed included in these contract documents as if set forth in full, if not actually printed herein.

If the contract documents contain a specific payment clause for restoration, then that clause shall apply; otherwise, payment for restoration shall be as described in Section 165.

SECTION I

INSURANCE

INSURANCE

- I. The Contractor, prior to signing of the contract, shall provide to the **Village of Dobbs Ferry** and maintain throughout the life of the contract, at his own cost and expense, proof of the following insurance by insurance companies licensed in the State of New York.
 - a. Workmen's Compensation. The Contractor shall take out and maintain during the life of this contract the statutory Workmen's Compensation, Disability, and Employer's Liability insurance for all of his employees to be engaged in work on the project under this Contract, and, in case any such work is sublet, the Contractor shall require the Subcontractor similarly to provide Workmen's Compensation, Disability, and Employer's Liability Insurance for all of the latter's employees to be engaged in such work.
 - b. Public Liability Insurance with a single limit of liability per occurrence for bodily injury and property damage of \$1,000,000. The Certificate of Insurance shall indicate the following coverage:
 - (1) Premises - Operations;
 - (2) Any deductibles shall not be the liability of the **Village of Dobbs Ferry, New York**.
 - c. Automobile Liability Insurance with the single limit of liability per occurrence for bodily injury and per occurrence for property damage at \$1,000,000. This insurance shall include coverage for:
 - (1) Owned automobiles;
 - (2) Hired automobiles;
 - (3) Non-owned automobiles.
 - d. Owners and Contractors Protective Liability Policy - \$1,000,000 single limit endorsed that the **Village of Dobbs Ferry** is not responsible for the premium.
 - e. Property Damage - Property Damage Insurance shall include the legal liability of its Contractor for loss or damage to property of the **Village of Dobbs Ferry**.
 - f. Unemployment Insurance - The Contractor for the agreed consideration, promises and agrees to pay the contributions measured by the wages of his employees required by State Unemployment Insurance Law and all amendments thereto, and to accept the account of any contribution measured by the wages as aforesaid of employees of the Contractor and his subcontractors assessed against the Owner under the authority of said law.

2. The Contractor shall obtain and maintain in full force and effect all of his insurance policies with a reputable insurer licensed to do business in the State of New York with at least an A Best rating.
3. All policies and certificates of the Contractor shall contain clauses as follows:
 - a. The insurance companies issuing the policy or policies shall have no recourse against the **Village of Dobbs Ferry, New York** for payment of any premium or for assessments under any form of policy.
 - b. Any and all deductibles in the above described insurance policies shall be assumed by and be for the account of, and at the sole risk of the Contractor.
 - c. In case of cancellation or material change in any of the policies, thirty (30) days notice shall be given to the **Village of Dobbs Ferry, New York**, by registered mail, return receipt requested.
4. All property losses shall be made payable to and adjusted with the **Village of Dobbs Ferry**.
5. All policies of insurance shall be acceptable to and approved by the Department of Law prior to the inception of any work.
6. Other coverages may be required by the **Village of Dobbs Ferry** based on specific need.
7. If, at any time, any of the said policies shall be or become unsatisfactory to the **Village of Dobbs Ferry**, as to form or substance, or if a company issuing such a policy shall be or become unsatisfactory to the **Village of Dobbs Ferry** the Contractor shall promptly obtain a new policy, submit same to the **Village of Dobbs Ferry**, for approval and submit a certificate thereof as hereinafter provided. Upon failure of the Contractor to furnish, deliver and maintain such insurance as above provide, this Contract, at the election of the **Village of Dobbs Ferry**, may be forthwith declared suspended, discontinued or terminated. Failure of the Contractor to take out and/or to maintain or the taking out and/or maintenance of any required insurance, shall not relieve the Contractor for any liability under the contract, nor shall the insurance requirements be construed to conflict with the obligations of the Contractor.
8. In the event that claims in excess of these amounts are filed by reason of any operations under the contract, the amounts of excess of such claims, or any portion thereof, may be withheld from payment due or to become due the Contractor until such time as the Contractor shall furnish additional security covering such claims.
9. The Insurance Policy shall be endorsed to name the **Village of Dobbs Ferry, AI Engineers, Inc., Dolph Rotfeld Engineering Division, 570 Taxter Road, Elmsford, NY 10523**, and any directors, officers, employees, subsidiaries, and affiliates, as additional insured on all policies and Hold Harmless documents, and shall stipulate that this insurance is primary, that any other insurance or self-insurance maintained by

the **Village of Dobbs Ferry and AI Engineers, Inc., Dolph Rotfeld Engineering Division, 570 Taxter Road, Elmsford, NY 10523**, shall be excess only and shall not be called upon to contribute with this insurance. ISO Additional Insured Endorsement form number CG2010 1185 under GL. Contractors Form B must be utilized and accompany the Certificate of Insurance.

10. Copies of the insurance policies shall be submitted to the **Village of Dobbs Ferry attorney and Village of Dobbs Ferry, AI Engineers, Inc., Dolph Rotfeld Engineering Division, 570 Taxter Road, Elmsford, NY 10523** for approval prior to the signing of the Contract.

SECTION J
SPECIAL CONDITIONS

SPECIAL CONDITIONS

SCOPE:

Furnish all labor, materials, equipment and incidentals necessary for the installation of new drainage structures, manholes, catch basins, DIP and HDPE pipe, concrete curbs, gutters, asphalt pavement and all applicable appurtenances; clean and restore the site, all in accordance with the Contract Drawings and these Specifications.

The Contractor shall be responsible for coordinating the adjustment of the gas and water valve boxes with Con Edison and the Dobbs Ferry Department of Public Works. The Contractor shall have no claim whatever against the Owner, Engineer or other parties due to delays or other reasons caused by the work of others or his failure to coordinate such work.

Any work that is necessary to complete the project, but is not included as a specific item, will be considered as incidental work and no direct payment will be made.

Items of work which are considered incidental include, but are not limited to stakeout and surveying, clean-up, obtaining and complying with permits and codes, coordination with other contractors, governmental agencies and utility companies. Payment for these and other incidental work items will be included in the Contractor's bid price.

TIME OF COMPLETION:

The Contractor shall provide the required bonds, insurance and other documents as may be required to complete this agreement and sign the Contract within ten (10) business days of notice of award. Work shall commence within ten (10) days after the signing of the contract, and shall be conducted in such a manner as to be completely finished on or before the expiration of ninety (90) consecutive calendar days. In the event that any portion of the contract is stopped by the Engineer due to inclement weather, or any other good and sufficient reason, the contractor will be granted an extension of time equal to the number of working days thereby.

PROJECT SCHEDULE:

Within 7 days after receiving the Notice of Award, the Contractor shall submit to the Owner a reasonable project schedule. The project schedule shall include the time to obtain all materials necessary to perform the project and identify a schedule date for the commencement of equipment installation and shall consist of a detailed bar graph with time frames specified for each phase of the construction, including locations.

SUBMISSION OF PAYMENT REQUISITION

The Contractors shall submit AIA Form G702 and necessary attachments as well as payment submission forms located in Section E of this contract with Payment Requisitions.

COORDINATION OF WORK

It shall be the responsibility of each Contractor to coordinate his work under this Contract with any work being done by others in the vicinity, as well as with the private utilities and the Village of Dobbs Ferry in order that the construction may proceed in an efficient and logical manner. The Contractor shall have no claim whatever against the Owner, Engineer or other parties due to delays or other reasons caused by the work of others or his failure to coordinate such work.

LIQUIDATED DAMAGES:

The Contractor and his Sureties shall be liable for and shall pay to the Owner the sum of \$900.00 (Nine Hundred Dollars) as fixed, agreed and liquidated damages for each calendar day of delay from the above stipulated completion, or as modified in accordance with the GENERAL CONDITIONS, until such work is satisfactorily completed and accepted.

NO SUBSTITUTIONS:

The Contractor shall bid the project as specified within this document. The Contractor shall not substitute materials, equipment or procedures from those identified in the specification document.

CONTRACTOR TO CHECK DIMENSIONS AND SCHEDULES:

The Contractor will be required to check all dimensions and quantities shown on the schedules given to him by the Owner, and shall notify the Owner of all errors therein which he may discover by examining and checking the same. The Contractor shall not take advantage of any error or omission in these specifications and schedules. The Owner will furnish all instructions should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

EXCAVATION OPERATIONS AT OR NEAR UNDERGROUND FACILITIES:

The Contractor's attention is directed to the State of New York, Department of Labor, Board of Standards and Appeals Industrial Code Rule 753 - "Construction, Excavation and Demolition Operations at or near Underground Facilities" effective April 1, 1975 and any amendments thereto.

CLEANING FINISHED WORK:

After the work is completed, all above grade and below grade structures shall be carefully cleaned free of dirt, broken masonry, mortar, construction and other debris and left in first class condition ready for use. All temporary or excess material shall be disposed of and the work left broom-clean to the satisfaction of the Owner.

LAYOUT OF WORK:

The Contractor shall perform all layout work necessary for the satisfactory execution of the construction as shown on the contract Drawings and all costs in connection therewith shall be included in the contract price.

WORK BY OTHERS:

It shall be the responsibility of the Contractor to coordinate his work under this Contract with any work being done by others in the vicinity, as well as with the private utilities and the Dobbs Ferry DPW, in order that the construction may proceed in an efficient and logical manner. The Contractor shall have no claim whatever against the Owner, Engineer or other parties due to delays or other reasons caused by the work of others or his failure to coordinate such work.

INTENT OF TECHNICAL SPECIFICATIONS:

The Technical Specifications included in this Contract indicate the general requirements for the type and quality of material to be furnished and installed, and work to be performed. The Contractor shall apply the general standards to the specific installations shown on the Contract Drawings. The Contractor shall adhere to the standards indicated in the Technical Specifications, and as ordered by the Engineer.

OSHA REQUIREMENTS:

The Contractor shall comply with the latest OSHA confined space entry requirements (29 CFR Part 1910).

The Contractor shall comply with the latest revised OSHA sheeting requirements (29 CFR Part 1926.650, 651, 652).

SHOP DRAWING SUBMITTALS

All shop drawings submitted to the engineer shall be accompanied by the submittal form included in Section E of this document completely filled out and signed by the Contractor. The contractor shall note, in writing, if there are any deviations from the Contract drawings and specifications.

MAINTENANCE OF FLOWS:

During the construction of all proposed work, the Contractor shall take every precaution and do the necessary work to maintain the flow of storm drainage, sanitary sewage and natural flows through the working areas. The Contractor is solely responsible for providing his flow control system and there shall be no separate payment for the required work. The contractor shall bear full responsibility and liability for any and all damages that are the result of any flooding and damages caused by contractor's failure to maintain the existing flows. The contractor shall make such provisions as may be required by the local, state or federal health officers or any other public bodies with jurisdiction over the flow of storm drainage, sanitary seepage and natural flows. The cost for providing by-pass pumping shall be deemed included in the bid price for this contract. No separate payment will be made for this work.

In the event the contractor uses water from natural water sources for his operations, intake method shall be such as to create no harmful effects; and where water is taken from a stream, reasonable flow downstream from the intake shall be maintained.

EMERGENCY TELEPHONE LIST

The Contractor shall provide to the Owner three-(3) telephone numbers which grant 24 hour, 7 day a week contact with a principal within the Contractor's company. The telephone numbers shall be utilized by the Owner in the event of an emergency situation arising during non-working hours.

PROTECTION OF EXISTING STRUCTURES AND FOUNDATIONS

During construction the Contractor shall be responsible to protect the existing utility poles, buildings, structures, walls, and foundations from damage and or collapse. All costs for this shall be deemed included in all items being bid, there shall not be any separate payment. The Contractor shall be responsible for supporting utility poles in compliance with Consolidated Edison and/or other utility companies requirements. The Contractor shall be responsible for any and all damages due to service interruptions.

SECTION K
TECHNICAL SPECIFICATIONS

ITEM 1M - MISCELLANEOUS ADDITIONAL WORK

1M.1. WORK INCLUDED:

- A. Under this item, the contractor shall furnish all labor, material and equipment required to accomplish miscellaneous additional work, necessitated by having encountered, during the course, field conditions of a nature not determinable during design, or for which no unit prices are applicable.

1M.2. MEASUREMENT

- A. Only that miscellaneous additional work shall be performed by the contractor and will be paid as has been authorized by the Engineer in writing, prior to its commencement.
- B. General Conditions, section 112 entitled "CHANGES IN THE WORK" will still apply regarding that the work under the contract may be increased or decreased.

1M.3. PAYMENT:

- A. The total amount paid to the contractor will be determined in accordance with the provisions of Section 112 of the General Conditions, entitled "CHANGES IN THE WORK", and such payment will include only that overhead and profit that is applicable to the work performed under this item.
- B. The Contractor shall include in his Total Bid price the unit price provided in the bid sheet opposite this item. This amount is given for the purpose of canvas, and any bid other than the specified amount will be considered informal.

* * *

ITEM 2M - MISCELLANEOUS EARTH EXCAVATION

2M.1. WORK INCLUDED:

- A. Under this item the Contractor shall do all excavation not specifically included in other items and necessary for the completion of the work including test pits, extra width of trench, extra depth of trench, or other miscellaneous excavation, but only where such excavation is done at the direction of the Engineer.

2M.2. METHOD:

- A. Such excavation shall be made and be subject to the same conditions and requirements as specified under the trench excavation paragraph of the appropriate item of construction in these specifications. Hand excavation shall be employed wherever, in the opinion of the Engineer, it is necessary for the protection of existing utilities, trees, pavements or other structures, at no additional cost.
- B. When test pits are directed to be excavated within the trench lines and ordered to be backfilled before the pipe is laid or structure is placed, such excavation will be included for payment under this item. If the test pit is dug and is used in the normal procedure of the work for installation of pipes or structure before final backfilling there shall be no payment under this item. Test pits may be dug by the Contractor, without being directed to do so along the lines of the trenches, in advance of the regular excavation, for the purpose of satisfying himself as to the location of underground obstructions or conditions, at the Contractor's own expense.
- C. Miscellaneous Excavation shall consist of any excavation and disposal of all materials in or outside the payment limits or scope of work of other items being bid under this contract. Such excavation shall only be made under the specific direction of the Engineer.

2M.3. MEASUREMENT AND PAYMENT:

- A. Payment will only be made under this item when additional excavation is made at the specific direction of the Engineer.
- B. The quantity of earth to be paid for under this item shall be the cubic yards of earth excavated in accordance with orders, or within the payment limit lines set forth below.
- C. Measurement of test pits shall be the size and depth directed by the Engineer. When, during the progress of the work, the trench lines are relocated at the direction of the Engineer, without abandoning any trench already excavated, the revised trench lines will constitute the trench payment lines referred to herein, and no additional payment will be made under this item. If, however, the relocation

of the trench lines results in the abandoning of trench already excavated, such excavation within the abandoned trench payment lines and outside of the relocated trench payment lines will be included for payment under this item.

- D. Payment for this item will be made only for excavation made outside the following limits and only as ordered by the Engineer:
1. Vertical planes twelve (12) inches outside any structure or pipe, or in the case of a combined trench, twelve (12) inches outside the exterior pipes.
 2. A horizontal plane one foot below the pipe invert shown on the drawings or six inches below the bottom of the structure shown on the drawings; or when specific invert elevations are not shown, but a 4 foot minimum cover is stated, a horizontal plane seven (7) feet below original grade. No payment under this item will be made for any excavation within the above limits.
- E. Payment for this item shall be at the unit price bid for this item. This price shall include the cost of furnishing all labor, materials and equipment necessary to complete all miscellaneous earth excavation as directed by the Engineer.

* * *

ITEM 5R - ROCK EXCAVATION – TRENCH (NO BLASTING)

5R.1. WORK INCLUDED:

- A. Under this item, the Contractor shall furnish all materials, labor and equipment necessary to make and maintain all trench excavation in rock, dispose of the rock and replace it with clean select material as required for backfill purposes, all as may be necessary for the proper execution of the work as outlined herein and as shown on the plans. **No blasting will be allowed.**

5R.2. DEFINITION:

- A. Trench rock shall be all rock excavation required for the installation of pipes, foundations and structures below grade.
- B. Any material shall be considered rock excavation which in the opinion of the Engineer cannot be excavated except by drilling and hammering. No soft or disintegrated rock which can be removed with the Contractor's excavation equipment (backhoe, etc.), a pick, nor any material which can be broken down by sledge hammers, nor ledge or boulders less than one half (1/2) cubic yard in volume, nor loose, shaken or previously blasted rock, nor broken stone in rock filling or elsewhere, nor concrete pavement slabs 12 inches or less in thickness shall be classified as rock.
- C. In addition the following shall also be considered as "Rock Excavation-Trench" when removed from trenches:
 - 1. Rock boulders one-half (1/2) cubic yard or larger.
 - 2. Concrete or brick foundations over 1/2 cubic yard.
- D. When a question arises as to whether material encountered is to be considered rock, the inspector shall have the right to instruct the Contractor to make a vigorous effort to remove it with his excavation machinery. If in the Engineer's opinion it cannot reasonably be removed by the machine, the Contractor will then proceed as specified below.

5R.3. METHOD:

- A. **No blasting shall be permitted.** Rock is to be removed by drilling, wedging and hydraulic hammer. The rock shall be excavated to provide sufficient room for the proper construction of foundations and the installation of pipe. The limits shall be at least those outlined under the "Measurement" paragraph or those shown on a detail on the drawings.
- B. Unless otherwise directed, rock shall be fully taken out at least twenty-five (25) feet in advance of the laying of pipe. Rock shall be removed sufficiently at joints so they

may be properly made. Rock shall be removed to a point six (6) inches below the bottom of the pipe. This six (6) inch space shall be filled with Size #1 crushed stone as indicated in Table 703-4 of the New York State Department of Transportation Standard Specifications, latest revision, and thoroughly tamped, the cost of which will be included in the unit price bid for this item.

C. Rock Disposition:

1. All excavated rock larger than 2 cubic feet shall be removed from the site under this item. Rock under 2 cubic feet may be placed back into the trench but shall be placed at least three feet away from pipes, footings or structures.

5R.4. MEASUREMENT:

- A. The surface of the ledge rock shall be stripped in sections satisfactory to the Engineer before the rock is excavated, so that proper measurements may be made before and after excavation. The Contractor shall be present to ascertain the measurements. The method of measurement and computation shall be by standard engineering procedures and determined by the Engineer.
- B. Rock excavation for structures, other than pipe, shall be computed to one foot outside the limits of the foundation of the structures and to the depth shown or ordered. No payment shall be made beyond the lines described.
- C. Trench rock excavation for pipe will be computed as having a width of two (2) feet greater than the outside diameter of the pipe, vertical sides, a flat bottom and depth from the surface of the rock to a plane six (6) inches below the bottom of the pipe. No payment will be made for additional width in pipe trenches at pipe joints nor beyond the lines described above. In trenches containing more than one pipe, payment limit lines will be as shown in a detail on the plans.

5R.5. PAYMENT:

- A. The quantity to be paid at the fixed price per cubic yard as designated in the Special Conditions of this Contract under Contingency Items. This shall include all labor, materials and equipment required to excavate and dispose of all rock within the payment lines as required. This shall also include all material required for backfilling due to rock removed from the site, and the placing of Size #2 stone as indicated in Table 703-4 of the latest New York State Dept. of Transportation Specifications at the bottom of the trench.
- B. Payment for rock will be in addition to such allowance as the Contractor may have included in his unit price for pipe or structures with respect to earth excavation and backfill.

* * *

ITEM 10 - STORM WATER DRAIN LINE

10.1. WORK INCLUDED:

- A. Under this item the Contractor shall furnish all labor, materials and equipment necessary to furnish and install pipe of various diameters, wyes, tees and caps in accordance with the plans. Contractor shall excavate and maintain the trench, properly install the pipe, connect the pipe to any and all structures and pipes as required or directed by the Engineer and backfill as hereinafter specified.

10.2. MATERIALS:

- A. Piping material shall be as specified on the Contract Drawings and Documents and as directed by the Engineer and shall meet the following specifications:
 - 1. Corrugated High Density Polyethylene Pipe (HDPE) and Fittings
 - (a) Shall conform to AASHTO M-252 (4 to 10-inch diameter) or AASHTO M-294 (12 to 36-inch diameter).
 - (1) Coefficient of Roughness (interior pipe surface): 0.020 maximum (Manning formula).
 - (2) Classification: Type C.
 - (3) Design Strength (all sizes): 50 feet allowable height of cover.
 - (4) Joint Couplings: Polyethylene Couplers; snap-on type or split collar through 24-inch diameter; screw-on type where applicable.
 - (5) Material Properties: High density polyethylene meeting the requirements of ASTM D 3350, Cell Classification 324420C; or ASTM 1248, Type III, Class C, Category 4, Grade P33.
 - (b) Fittings:
 - (1) High density polyethylene meeting the properties specified for the pipe.
 - (2) Either molded or fabricated.
 - (3) Designed specifically for the pipe furnished and manufactured by the pipe manufacturer.
 - (4) Joint shall be watertight according to the laboratory requirements of ASTM D3212.
 - (c) Perforated Pipe: Conform to AASHTO M-252 or AASHTO M-294, Type SP with Class I perforations.

- (d) HDPE pipe and accessories shall be manufactured by Advanced Drainage Systems, Inc., 3300 Riverside Dr., Columbus, OH 43221; (614) 457-3051 or approved equal.

10.3. INSTALLATION:

A. Cutting Pavement

1. Before making any excavation, the Contractor shall cut the edge of the trench. Ripping of pavement by means of excavating equipment will not be permitted. In case of asphalt pavement, initial cutting of the edge shall be done by means of pneumatic drill with spade-shaped bit or by saw, at Contractor's option. Cuts in asphalt pavement for final permanent pavement must be made by a concrete saw. Concrete pavement may initially be cut by pneumatic drill or by concrete saw. Cuts in concrete pavement for final permanent pavement must be made by a concrete saw.

B. Excavation of Trench

1. The Contractor shall excavate a trench to the depth shown on the profiles and to a width of one (1) foot on each side of the outside of the pipe. Enlargements shall be made at the joints to permit proper installation. The Contractor shall not use equipment, which will excavate a trench wider than that specified. Hand excavation shall be employed wherever, in the opinion of the Engineer, it is necessary for the protection of existing utilities, trees, pavements or other structures, at no additional cost.
2. All excavation shall be by open cut method unless tunneling is required or authorized by the Engineer. Such tunneling shall be at the same unit price unless a separate bid item is provided therefore.
3. Excavation of the trench under this item shall include all necessary removal and replacement of curbs, gutters, walks and driveways and the cutting and removing of existing pavement.
4. The Contractor shall keep the trenches free from water. This shall be done as part of this item.
5. At least 20 feet of trench shall be excavated in front of the previously laid pipe. Trench shall not remain open overnight without the express approval of the Engineer. The Contractor may plate the trench under the provision that all plates are secured with spikes and blacktop wedges.
6. Additional depth of trench shall be excavated as required to clear obstructions not shown on the plans. Measurement for this extra excavation shall be from a point one (1) foot below the designated invert of the pipe to the bottom of the excavation. There shall be no payment for the first foot of extra depth under the

Miscellaneous Earth Excavation item. Payment for the first foot shall be included as part of this item.

C. Sheeting and Bracing

1. Trenches shall be properly sheeted, shored and braced as necessary to prevent shifting of materials, to prevent damage to structures, pavement and pipes and to provide safe working conditions. The Contractor shall be responsible for providing, installation of and for the adequacy of all sheeting and bracing used and for all damage resulting from its failure or from placing, maintaining and removing it. No payment will be made for sheeting and bracing if it is removed, or if it is left in place for the Contractor's convenience. If the sheeting and bracing is ordered to be left in place by the Engineer after having been constructed, the Contractor shall be entitled to the cost of materials so left in place.
2. If there is a space between the sheeting and the side of the trench, the space shall be backfilled with suitable material thoroughly compacted in place. Where adjacent structures, pavement or pipes may be damaged by the removal of sheeting, the Contractor shall not remove the sheeting. All sheeting left in place shall be cut off at least two (2) feet below the surface of the ground. Where sheeting or shoring is to be removed, the removal shall be in such a manner as to prevent loss of ground.
3. The Contractor's attention is drawn to the NYS Department of Labor Industrial Code Rule #753 and O.S.H.A. regulations, which must be strictly adhered to. Prefabricated sheeting boxes may be used only with the approval of the Engineer as to the box itself and the method of use.

D. Handling of Pipe

1. All pipe shall be handled in a manner such that it will not be damaged or overstressed. Properly designed lifting apparatus shall be used in loading, unloading and lowering pipe into place for laying. Any type of mishandling or damage to the pipe during any phase of the work will be cause for rejection by the Engineer.

E. Pipe Foundation

1. The pipe shall rest on a 6" bed of #2 crushed stone. Soft, spongy or other unstable soil encountered at the invert established shall be excavated and removed. Excavation shall be for a width of one (1) foot outside the pipe and to a depth as called for by the Engineer. The pipe shall then receive a foundation of crushed stone, if required by the Engineer. The cost of this crushed stone shall be paid for under its own Item, and will include the cost for proper disposal of the unsuitable material.

2. Excavation of the unstable bottom below the deigned invert shall be under the Miscellaneous Earth Excavation item. Measurement for this extra excavation shall be from a point one foot below the invert of the pipe to the bottom of the excavation. There shall be no payment for the first foot of extra depth under the Miscellaneous Earth Excavation item. Payment for this first foot shall be included as part of this item.

F. Laying of Pipe

1. The pipe shall be laid in the trench to conform accurately to the line and grade as called for by the contract drawings. The method of setting line and grade must meet the approval of the Engineer. Each pipe shall be laid on undisturbed ground supported throughout and the entire barrel or pipe shall have a uniform bearing from end to end. The use of blocks shall be strictly forbidden, except upon the express approval of the Engineer.
2. Where excavation has been made below the required grade, such areas shall be backfilled with suitable select backfill material free from stones in excess of 1 1/2" in any dimension and compacted at the expense of the Contractor. All loose or unsuitable materials shall be removed from the trench bottom.
3. Where a line goes from one condition of bearing to another, as from rock cut to earth, or from concrete mattress to gravel bed, special care is to be exercised to see that the less firm bearing ground is tamped and secured.

G. Backfilling

1. After the pipe has been properly laid and inspected as required the space between the pipe and the sides of the trench shall be filled to the middle of the pipe with Item 4 (NYS DOT 304.13) free from large stones and unsuitable material, and carefully rammed under and around the pipe to give it a firm foundation. At this point the Engineer will be notified and he shall inspect the pipes. Pipes, which in the opinion of the Engineer have deformed or joints which have opened shall be excavated and satisfactorily repaired or replaced at no additional payments by the Owner. Then the trench shall be backfilled with Item 4. Materials excavated from the trench shall not be allowed as backfill. . No separate payment shall be made for removal and disposal of excavated material.
2. Excess material excavated from the trench, shall be removed from the site as part of this item.

H. Interfering Structures

1. The Contractor shall, under this contract, and as called for in the General Conditions sustain and protect from direct or indirect injury all pipes, poles, conduits, walls, buildings, roadways and other structures, utilities and property in the vicinity of his work. Such sustaining and supporting shall be carefully done

by the Contractor and as required by the Company or party owning the structure. The Contractor shall take all risks attending their presence and he shall be responsible for all damage and assume all expense for direct /or indirect injury caused by his work, to any of them or to any person or property by reason of injury to them whether such structures are or are not shown on the drawings.

2. Should the position of any pipe, conduit, pole or other structure, except structures and pipe specifically shown to be removed, be such as in the opinion of the Engineer to require its removal, realignment or change such work will be done by the Owner of the obstruction, without cost to the Contractor but the Contractor shall uncover and support the structures, at his own expense, before and after such removal, realignment or change, as part of this contract, and the Contractor shall not be entitled to any claim for damage or extra compensation resulting from any delay in the removal or rearrangement of the same. Wherever so directed, the Contractor shall excavate test pits to locate subsurface obstructions or pipes.

I. Inspections

1. Pipes, which in the opinion of the Engineer have deformed, or joints which have opened, shall be excavated and satisfactorily repaired or replaced at no additional cost to the Owner.

J. Cleaning Pipes

1. The Contractor shall prevent earth, stone, sand, or debris of any nature from entering the lines. Should any material enter the line, the line shall be flushed, or dragged until satisfactorily cleaned, and provision shall be made to catch all such matter before it can enter any drain lines.

10.4. MEASUREMENT:

- A. The quantity of pipe to be paid for under this item shall be the actual number of linear feet of pipe line, regardless of the sizes or types laid by the Contractor, as measured along the center line of the pipe from inside face to inside face of structures without regard to the lengths of the individual pieces of pipe or cuts, or joints required.

10.5. PAYMENT:

- A. The payment for this item shall be on a linear foot basis at the unit price bid and shall include all pipe and related materials, labor and equipment and other miscellaneous expenses; for excavation and backfill maintaining and sheeting the trench, for furnishing and laying of the pipe and fittings, and for connecting the pipe to all existing structures and leader pipes as required.

Item No. 10HDPE- 15"

Per Linear Foot

Item No. 10 HDPE-18"

Per Linear Foot

* * *

ITEM 10DIP - STORM WATER DRAIN LINE (DIP)

10DIP.1. WORK INCLUDED:

- A. Under this item the Contractor shall furnish all labor, materials and equipment necessary to furnish and install ductile iron pipe of various diameters in accordance with the plans. Contractor shall excavate and maintain the trench, properly install the pipe, connect the pipe to any and all structures as required or directed by the Engineer and backfill as hereinafter specified.

10DIP.2. MATERIALS:

- A. Ductile Iron Pipe
- B. All ductile iron pipe shall conform to the following standard specifications:
 - 1. ANSI A21.51-1976 for ductile pipe, centrifugally cast in metal molds or sand lined mold for water or other liquids.
 - 2. ANSI A21.4-1974 for cement mortar lining.
 - 3. ANSI A21.11-1979 for rubber gasket joints for cast iron and ductile iron pipe and fittings.
- C. The pipe shall be thickness as shown on the plans unless otherwise noted. The joints shall be of type which employ a gasket to effect the joint seal. Interior coating shall be cement mortar, exterior coating shall be either coal, tar or asphalt.

10DIP.3. INSTALLATION:

- A. Cutting Pavement
 - 1. Before making any excavation, the contractor shall cut the edge of the trench. Ripping of pavement by means of excavating equipment will not be permitted.
 - 2. In the case of asphalt pavement, cutting of the edge shall be done by means of pneumatic drill with spade-shaped bit.
 - 3. Concrete pavement may initially be cut by pneumatic drill or by a concrete saw. Cuts in concrete pavement for final permanent pavement must be made by a concrete saw.
- B. Excavation of Trench

1. The Contractor shall excavate a trench to the depth shown on the profiles and to a width one (1) foot outside the pipe. The Contractor shall not use equipment which will excavate a trench wider than that specified. Hand excavation shall be employed wherever in the opinion of the Engineer it is necessary for the protection of existing utilities, trees, pavements or other structures.
2. All excavation shall be by open cut method unless tunneling is authorized by the Engineer.
3. Excavation of the trench under this item shall include all necessary removal and replacing of curbs, gutters, walks and driveways and the cutting and removing of pavement. The Contractor shall keep the trenches free from water.
4. Trench rock shall be excavated to a depth of 6 inches below the pipe.
5. At least 20 feet of trench shall be excavated in front of the laying of the pipe. No trench shall remain open over night without the express approval of the Engineer.

C. Sheeting and Bracing

1. Trenches shall be properly sheeted shored and braced as necessary to prevent shifting of materials, to prevent damage to structures, pavement and pipes, and to provide safe working conditions. The Contractor shall be responsible for providing and installation and for the adequacy of all sheeting and bracing used and for all damage resulting from its failure or from placing, maintaining and removing it. No payment will be made for sheeting and bracing if it is removed, or if it is left in place for the Contractor's convenience. If the sheeting and bracing is ordered to be left in place by the Engineer after having been constructed, the Contractor shall be entitled to the cost of materials so left in place.
2. If there is a space between the sheeting and the side of the trench the space shall be backfilled with suitable material thoroughly compacted in place. Where adjacent structures, pavement, or pipes may be damaged by the removal of sheeting, the Contractor shall not remove the sheeting. All sheeting left in place shall be cut off at least 2 feet below the surface of the ground. Where sheeting or shoring is to be removed,, the removal shall be in such a manner as to prevent loss of ground.
3. Attention is drawn to the New York State Department of Labor Industrial Code Rule #23 and O.S.H.A. regulations. Prefabricated sheeting boxes may be used only with the approval of the Engineer as to the box itself and the method of use.

D. Pipe Foundation

1. The pipe shall rest on a 6" bed of #2 crushed stone. Soft, spongy or other unstable soil encountered at the invert established shall be excavated and removed. Excavation shall be for a width of one (1) foot outside the pipe and to a depth as called for by the Engineer. The pipe shall then receive a foundation of crushed stone, if required by the Engineer. The cost of this crushed stone shall be paid for under its own Item, and will include the cost for proper disposal of the unsuitable material.
2. Excavation of the unstable bottom below the designed invert shall be under the Miscellaneous Earth Excavation item. Measurement for this extra excavation shall be from a point one foot below the invert of the pipe to the bottom of the excavation. There shall be no payment for the first foot of extra depth under the Miscellaneous Earth Excavation item. Payment for this first foot shall be included as part of this item.

E. Handling of Pipe

1. The pipe shall be handled in a manner such that it will not be damaged or overstressed. Properly designed lifting apparatus shall be used in loading, unloading and lowering pipe into place for laying. Any type of mishandling or damage to the pipe during any phase of the work will be cause for rejection by the Engineer.

F. Laying Pipe

1. The pipe shall be laid in the trench to conform accurately to the line and grade as called for on the plans. Each pipe shall be laid on undisturbed ground supported throughout and the pipe shall have a uniform bearing from end to end. The use of blocks shall be strictly forbidden, except upon the express approval of the Engineer.
2. Where excavation has been made below the required grade, such areas shall be backfilled with suitable materials and compacted at the expense of the Contractor. All loose or unsuitable materials shall be removed from the trench bottom.
3. Where a line goes from one condition of bearing to another, from rock cut to earth or to gravel bed, special care is to be exercised to see that the less firm bearing ground is tamped and secure.

G. Backfilling

1. Unsuitable materials, determined by the Engineer, shall be removed from the job site.

2. After the pipe has been properly laid and inspected as required the space between the pipe and the sides of the trench shall be filled to the middle of the pipe with selected materials free from stones and carefully rammed under and around the pipe to give it a firm foundation. At this point the Engineer will be notified and he shall inspect the pipes. Pipes, which in the opinion of the Engineer have deformed or joints which have opened shall be excavated and satisfactorily repaired or replaced at no additional payments by the Owner. Then the trench shall be filled to a point at least one (1) foot above the pipe with earth free from stones, and carefully rammed so as not to disturb the pipe to a compaction at least equal to the surrounding earth. The earth above this point shall be backfilled and compacted in nine (9) inch layers and addition of water may be required by the Engineer to achieve the required compaction. No stones larger than two (2) cubic feet shall be allowed in trench backfill within three (3) feet of the pipe. Unsuitable materials excavated from the trench shall not be allowed as backfill and shall be replaced by suitable material, as approved by the Engineer, under this item. No separate payment shall be made for removal and disposal of unsuitable material.
3. Unsuitable material shall be as determined by the Engineer and shall include, but not be limited to such materials as organic materials, roots, stumps, rocks or bony backfill, clay, silt, mud, wood, concrete slabs, or frozen soil.
4. Excess material and unsuitable material, excavated from the trench, shall be removed from the site as part of this item.

H. Interfering Structures

1. The Contractor shall, under this contract, and as called for in the General Conditions sustain and protect from direct or indirect injury all pipes, poles, conduits, walls, buildings, roadways and other structures, utilities and property in the vicinity of his work. Such sustaining and supporting shall be carefully done by the Contractor and as required by the Company or party owning the structure. The Contractor shall take all risks attending their presence and he shall be responsible for all damage and assume all expense for direct /or indirect injury caused by his work, to any of them or to any person or property by reason of injury to them whether such structures are or are not shown on the drawings.
2. Should the position of any pipe, conduit, pole or other structure, except structures and pipe specifically shown to be removed, be such as in the opinion of the Engineer to require its removal, realignment or change such work will be done by the Owner of the obstruction, without cost to the Contractor but the Contractor shall uncover and support the structures, at his own expense, before and after such removal, realignment or change, as part of this contract, and the

Contractor shall uncover and support the structures, at his own expense, before and after such removal, realignment or change, as part of this contract, and the Contractor shall not be entitled to any claim for damage or extra compensation resulting from any delay in the removal or rearrangement of the same. Wherever so directed, the Contractor shall excavate test pits to locate subsurface obstructions or pipes.

I. Inspections

1. Pipes, which in the opinion of the Engineer have deformed or joints which have opened shall be excavated and satisfactorily repaired or replaced at no additional cost to the Owner.

J. Cleaning Pipes

1. The Contractor shall prevent earth, stone, sand or debris of any nature from entering the lines. Should any material enter the line, the line shall be flushed, or dragged until satisfactorily cleaned, and provision shall be made to catch all such matter before it can enter any drain lines.

10DIP.4. MEASUREMENT:

- A. The quantity of pipe to be paid for under this item shall be the actual number of linear feet of pipe line, regardless of the sizes or types laid by the Contractor, as measured along the center line of the pipe from inside face to inside face of structures without regard to the lengths of the individual pieces of pipe or cuts, or joints required.

10DIP.5. PAYMENT:

- A. The payment for this item shall be on a linear foot basis and shall include all materials, labor and equipment and other miscellaneous expenses; for excavation and backfill maintaining and sheeting the trench, for furnishing and laying of the pipe, and for connecting the pipe to all structures as required.

Item 10DIP-16"

Per Linear Foot

* * *

ITEM 20G - CONCRETE CURB & GUTTER

20G.1. WORK INCLUDED:

- A. Under this item the Contractor shall saw cut, excavate, backfill and supply all materials, labor, and equipment necessary to install concrete curb & gutter and to remove any existing curbing & pavement, as shown on the plans or as directed by the Engineer.

20G.2. MATERIALS:

A. Concrete

1. The material requirements, mix preparations and manufacturing of concrete shall comply with the specifications for Class A concrete in Section 501 - "Portland Cement Concrete- General" of the New York State Department of Transportation Standard Specifications, Latest Revision.
2. Concrete shall contain an air-entraining agent and shall have a strength of 3,500 lbs. per square inch at 28 days.

B. Expansion Material

1. Expansion material shall be one-half (1/2) of an inch thick Premoulded Bituminous Joint Filler as specified in section 705-07 of the New York State Department of Transportation Standard Specifications.

C. Rebar Reinforcing

1. Reinforcing bars shall be #5 bars - Item 709-01 (New York State Department of Transportation Specifications) and 6x6 welded wire mesh, as per details. Curing and anti-spalling sealer shall be Durok Shield or equal.

D. Sub-Base

1. The subbase course material used shall be bank run gravel (NYSDOT 304.02).

20G.3. INSTALLATION:

A. Subgrade

1. The Contractor shall saw cut the existing pavement and excavate the curb trench to the proposed subgrade. If such sub-grade is of unsuitable materials, all such materials, shall be removed and replaced with select materials, as called for by the Engineer, tamped, and brought up to the proper grade.

B. Sub-Base

1. The sub-base course shall be placed and compacted in accordance with §304-3.01 through §304-3.05 of the New York Department of Transportation Standard Specifications and/or as detailed in the plans.
2. The concrete curb & gutter shall be placed on a well prepared sub-base, with a minimum depth of four (4) inches. The sub-base shall be compacted and of the type and depth indicated on the detail drawings.

C. Curbing & Gutter

1. The Contractor shall construct a poured concrete curb & gutter with a width of six (6) inches at the top, eight (8) inches at the bottom, and a height of eighteen (18) inches and 8" gutter, as per details. The back of the curb & gutter shall be plumb, and the face shall be battered with the front edge bullnosed with three-quarter (3/4)-inch radius. All steel or wood forms shall be solidly braced, set accurately to line and grade, and set up well in advance of a point to which concrete is being poured. The curb & gutter shall be set with a six (6) inch reveal, or two (2) inch reveal where depressed, and shall be finished in such a manner that the face is smooth and free of voids or depression. The Contractor shall set the required steel reinforcing bar 2 inches from the bottom of the curb and 6x6 wwm as per detail. Expansion joints 1/2 inch in width shall be formed with Premoulded Bituminous Joint Filler and shall be placed every ten (10) feet and where the ground changes in bearing character. The filler material shall be cut to conform to the cross section of the curb & gutter.
2. Concrete shall not be poured until the Engineer has checked the forms to the proper lines and grades. Any variations exceeding one-quarter (1/4) inch in grade or one-half (1/2) inch in line shall be corrected. The Engineer shall also check the bracing of the forms, sub-grade conditions, and the proposed procedure of the pour. The Contractor shall provide such assistance as may be required in checking and shall be responsible for the proper shape, line and grade of the new curb & gutter.
3. Except when given specific permission by the Engineer to do otherwise, concrete curb & gutter shall be poured only when the temperature is at least forty (40) degrees Fahrenheit and rising with no indication of falling to freezing until a safe set is obtained. During the cold months protection from freezing shall be available before the pour is begun.
4. The forms shall be left in place until the concrete has set sufficiently so that, in the opinion of the Engineer they can be finished in such a manner that the face is smooth and free of voids or depressions, but no plastering will be permitted. For this work, competent and skillful finishers shall be employed.

5. After finishing, the curb & gutter shall be sprayed with curing compound and protected from drying for at least three (3) days. At the time of acceptance, the entire curb must be considered acceptable by the Engineer.
6. At the location of the existing driveways or at locations ordered by the Engineer, drop curbs shall be formed in the freshly poured concrete for driveways.
7. Driveway depressions shall be to a finished height of two (2) inches above finished pavement at the face of the curb, and shall slope upwards one (1) inch to the back of the curb. The front edge shall have a bullnose similar to, or of slightly greater radius than, the curb. The transition from the curb top to the depression shall be shaped as a smooth reverse curve in such a way as to allow safe passage for autos.
8. The newly laid curb & gutter shall be protected from traffic by barricades or other suitable methods until the concrete has properly set as judged by the Engineer.
9. Two standard test cylinders are to be made with each truck load, if directed by the Engineer, and cured under conditions equal to the curb & gutter. The Contractor is responsible for preparing the cylinders in accordance with A.C.I. standards, storing and protecting the cylinders onsite, delivery to and testing at a testing facility approved by the Engineer. The Contractor shall bear all costs and related expenses for testing. One cylinder from each pour shall be tested at 28 days. If the test results are satisfactory, the second test cylinder shall be discarded by the Contractor. If the results of the first test cylinder are not satisfactory, the second test cylinder shall be tested immediately. The Contractor shall bear all related costs. A copy of all test result must be submitted to the Engineer.
10. The area behind the curb shall be backfilled and tamped to the proper grades with select materials.

20G.4. MEASUREMENT AND PAYMENT:

- A. Curbing & gutter will be measured for payment along the top of the curb and will be the actual number of linear feet of the curb completed and accepted. Payment will include all required saw cutting, excavation, backfilling, removal and disposal of surplus material, repaving necessary to replace existing roadway where distributed by the construction of the curbs and all materials, labor, equipment tools and work incidental to or necessary for the construction, curing and protection of the curbs. **No payment will be made to repair curb damaged by the Contractor in areas not included in the proposed work, this work will be covered under Item 127.**

ITEM 25CC - CONCRETE CURBING WITH REBAR

25CC.1. WORK INCLUDED:

- A. Under this item the Contractor shall saw cut, excavate, backfill and supply all materials, labor, and equipment necessary to install concrete curbing and to remove any existing curbing as shown on the plans or as directed by the Engineer.

25CC.2. MATERIALS:

A. Concrete

- 1. The material requirements, mix preparations and manufacturing of concrete shall comply with the specifications for Class A concrete in Section 501 - "Portland Cement Concrete- General" of the New York State Department of Transportation Standard Specifications, Latest Revision.
- 2. Concrete shall contain an air-entraining agent and shall have a strength of 3,500 lbs. per square inch at 28 days.

B. Expansion Material

- 1. Expansion material shall be one-half (1/2) of an inch thick Premoulded Bituminous Joint Filler as specified in section 705-07 of the New York State Department of Transportation Standard Specifications.

C. Rebar Reinforcing

- 1. Reinforcing bars shall be #5 bars - Item 709-01 (New York State Department of Transportation Specifications). Curing and anti-spalling sealer shall be Durok Shield or equal.

D. Sub-Base

- 1. The subbase course material used shall be bank run gravel (NYSDOT 304.02).

25CC.3. INSTALLATION:

A. Subgrade

- 1. The Contractor shall saw cut the existing pavement and excavate the curb trench to the proposed subgrade. If such sub-grade is of unsuitable materials, all such materials, shall be removed and replaced with select materials, as called for by the Engineer, tamped, and brought up to the proper grade.

B. Sub-Base

1. The sub-base course shall be placed and compacted in accordance with §304-3.01 through §304-3.05 of the New York Department of Transportation Standard Specifications and/or as detailed in the plans.
2. The concrete curb shall be placed on a well prepared sub-base, with a minimum depth of four (4) inches. The sub-base shall be compacted and of the type and depth indicated on the detail drawings.

C. Curbing

1. The Contractor shall construct a poured concrete curb with a width of six (6) inches at the top, eight (8) inches at the bottom, and a height of eighteen (18) inches. The back of the curb shall be plumb, and the face shall be battered with the front edge bullnosed with three-quarter (3/4)-inch radius. All steel or wood forms shall be solidly braced, set accurately to line and grade, and set up well in advance of a point to which concrete is being poured. The curb shall be set with a six (6) inch reveal, or two (2) inch reveal where depressed, and shall be finished in such a manner that the face is smooth and free of voids or depression. The Contractor shall set the required steel reinforcing bar 2 inches from the bottom of the curb. Expansion joints 1/2 inch in width shall be formed with Premoulded Bituminous Joint Filler and shall be placed every ten (10) feet and where the ground changes in bearing character. The filler material shall be cut to conform to the cross section of the curb.
2. Concrete shall not be poured until the Engineer has checked the forms to the proper lines and grades. Any variations exceeding one-quarter (1/4) inch in grade or one-half (1/2) inch in line shall be corrected. The Engineer shall also check the bracing of the forms, sub-grade conditions, and the proposed procedure of the pour. The Contractor shall provide such assistance as may be required in checking and shall be responsible for the proper shape, line and grade of the new curb.
3. Except when given specific permission by the Engineer to do otherwise, concrete curb shall be poured only when the temperature is at least forty (40) degrees Fahrenheit and rising with no indication of falling to freezing until a safe set is obtained. During the cold months protection from freezing shall be available before the pour is begun.
4. The forms shall be left in place until the concrete has set sufficiently so that, in the opinion of the Engineer they can be finished in such a manner that the face is smooth and free of voids or depressions, but no plastering will be permitted. For this work, competent and skillful finishers shall be employed.
5. After finishing, the curb shall be sprayed with curing compound and protected from drying for at least three (3) days. At the time of acceptance, the entire curb must be considered acceptable by the Engineer.

6. At the location of the existing driveways or at locations ordered by the Engineer, drop curbs shall be formed in the freshly poured concrete for driveways.
7. Driveway depressions shall be to a finished height of two (2) inches above finished pavement at the face of the curb, and shall slope upwards one (1) inch to the back of the curb. The front edge shall have a bullnose similar to, or of slightly greater radius than, the curb. The transition from the curb top to the depression shall be shaped as a smooth reverse curve in such a way as to allow safe passage for autos.
8. The newly laid curb shall be protected from traffic by barricades or other suitable methods until the concrete has properly set as judged by the Engineer.
9. Two standard test cylinders are to be made with each truck load, if directed by the Engineer, and cured under conditions equal to the curb. The Contractor is responsible for preparing the cylinders in accordance with A.C.I. standards, storing and protecting the cylinders onsite, delivery to and testing at a testing facility approved by the Engineer. The Contractor shall bear all costs and related expenses for testing. One cylinder from each pour shall be tested at 28 days. If the test results are satisfactory, the second test cylinder shall be discarded by the Contractor. If the results of the first test cylinder are not satisfactory, the second test cylinder shall be tested immediately. The Contractor shall bear all related costs. A copy of all test result must be submitted to the Engineer.
10. The area behind the curb shall be backfilled and tamped to the proper grades with select materials.

25CC.4. MEASUREMENT AND PAYMENT:

- A. Curbing will be measured for payment along the top of the curb and will be the actual number of linear feet of the curb completed and accepted. Payment will include all required saw cutting, excavation, backfilling, removal and disposal of surplus material, repaving necessary to replace existing roadway where distributed by the construction of the curbs and all materials, labor, equipment tools and work incidental to or necessary for the construction, curing and protection of the curbs. **No payment will be made to repair curb damaged by the Contractor in areas not included in the proposed work, this work will be covered under Item 127.**

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ITEM 30-S - Sawcut and Blend 6ft Keyways

30.1. WORK INCLUDED:

- A. Under this item the Contractor shall cut keyways to blend the asphalt overlay to the existing pavement at intersections as shown on the plans and as directed by the Engineer.

30.2. METHOD:

- A. The Contractor shall cut a 6-foot wide by 3 ½"-inch deep keyway along intersections where the new asphalt top course meets the existing pavement.
- B. Cuts will be made by sawcutting, all asphalt shall be removed from the site.

30.3. MEASUREMENT AND PAYMENT:

- A. Measurement and payment for this item shall be on a linear foot basis at the unit price bid and shall include all materials, labor and equipment necessary for the cutting of keyways as shown on the Contract Drawings and as described herein. **No payment will be made for keyways which have not been sawcut.**

* * *

ITEM 39 - Furnish & Install Crushed Stone or Gravel

39.1. WORK INCLUDED:

- A. Under this item the Contractor shall furnish and place crushed stone or gravel when and where called for by the Engineer. This item will in general cover the use of the material placed to correct unsuitable subgrade conditions in earth, but is not necessarily limited to this purpose.

39.2. MATERIALS:

- A. All materials shall conform to the New York State Department of Transportation Standard Specifications, latest revision, except that no limestone or crushed slag shall be permitted. Stone sizes referred to are as specified in Table 703-4 of the latest NYSDOT specifications. The stone size to be supplied shall be as specified on the plan or in the proposal or as ordered in the field by the Engineer.

39.3. INSTALLATION:

A. Placement

1. When unsuitable, unstable, mucky foundations for pipes, structures, or roadways are encountered the Contractor shall notify the Engineer, who shall, if he deems it necessary, order the excavation of the muck to defined lines and grade. The Contractor shall then supply the material ordered by the Engineer and carefully place it within the area so excavated. The material shall be placed in 6 inch layers and be compacted, in trenches by hand or mechanical tampers, and in roadways by roller.

B. Testing

1. The Engineer may, if he deems it necessary, take samples of the material supplied and have it analyzed to ascertain whether or not it fulfills the requirements of the specifications set forth.
2. If the material does not meet these specifications and has already been utilized in the construction, payment shall be reduced to 50% of the bid price and the Contractor shall pay for the cost of testing.

39.4. MEASUREMENT:

- A. Measurement shall be by the cubic yard of the designated material actually placed within the payment limit lines ordered.
- B. For stabilization of pipe trenches the measurement shall be within the following payment limit lines:

1. Length - The length measurement shall be the actual length of trench ordered to be stabilized by the Engineer.
2. Width - The width measurement shall be one foot on each side outside the pipe or structure being installed, irrespective of actual width of trench excavated or stabilized.
3. Depth - The depth measurement for material placed shall be the depth of the excavation below the normal trench bottom pay limit for pipe or structure as ordered by the Engineer. In no case shall payment be made to depths below those ordered by the Engineer. No payment shall be made for using crushed stone or gravel to fill undercuts below the required grade when not ordered by the Engineer.

39.5. PAYMENT:

- A. The payment shall be at the unit price bid. This price shall include all labor, materials and equipment necessary for furnishing the materials, for placing and preparing them in the trench as specified or directed, and for the proper disposal of replaced material.
- B. Excavation of the trench shall be paid for under the pipe installation item.
- C. No payment will be made under this item for gravel or crushed stone used in connection with any item where this material is specified on the plans or in the specifications to be included under that item.

* * *

ITEM 43WMA – WARM MIX ASPHALT (WMA) TRUING & LEVELING COURSE

43WMA.1. WORK INCLUDED:

- A. Under this item the Contractor shall furnish all labor, materials and equipment necessary to place an asphaltic truing and leveling course on top of the existing pavement in accordance with the plans and specifications. The thickness shall be as specified on the plan or elsewhere in these specifications.

43WMA.2. MATERIALS:

- A. The tack coat shall be as specified in Section 407 of the State of New York Department of Transportation Specifications, latest revision.
- B. The truing and leveling material used shall be Asphalt Concrete – Truing and Leveling as specified in Section 401 of the State of New York Department of Transportation Specifications, latest revision.
- C. WMA will consist of a HMA mix design in production status and appropriate WMA production process approved by the Engineer. The WMA shall be produced below 275°F utilizing a HMA mix design in production status and an appropriate WMA Technology.
- D. Fabricate the HMA mix design as currently being produced, and the WMA mix design in the laboratory for a single point mix verification. Also fabricate specimens for Moisture Susceptibility testing as outlined in NYSDOT Standard Specifications, Materials Method 5.16 or Materials Method 5.13 regardless of aggregate sources. When fabricating WMA test specimens, be sure the design WMA additive is present, and the laboratory fabrication simulates the intended plant manufacture of the specific WMA technology utilized. Municipality personnel may be present during the fabrication and testing procedures. If the TSR of the WMA gyratory specimens is less than 80%, corrective action is required. When corrective action is necessary, any changes made to the design must be noted on the JMF, and all other volumetric and mechanical properties must be evaluated for compliance with requirements. After corrective action has been taken, retest the mixture according to this section.
- E. The Performance-Graded Binder (PG Binder) intended for use with the WMA Production process must be treated with the additive at the design dosage and certified to meet the grading requirements outlined in the contract documents. If a process to sample treated PG Binder is not available at the Production facility, samples of PG Binder accompanied by the WMA Additive, mixing recommendations, and MSDS sheets must be submitted for acceptance testing. If multiple PG Binder sources will be utilized, then each source needs to conform to the specification with the design dosage of the Warm Mix additive.

- F. The Municipality reserves the right to suspend any mixture design when the mixture demonstrates unacceptable paving quality or exhibits properties that will affect the anticipated pavement performance.
- G. The Quality Control requirements outlined in Section 401-3 of the State of New York Department of Transportation Specifications shall apply, with additional QC Plan revisions to address specific WMA process controls and are subject to approval by the Engineer. WMA Quality Control guidelines are available from the Materials Bureau.
- H. A mix design utilized as WMA will commence production under mix Verification Status as outlined in MM 5.16 regardless of the HMA JMF status. The six 1-quart PGB samples obtained from the plant will be either modified PGB for use in WMA production, or the design PGB accompanied by the WMA modifier with design dosage rate, MSDS, and manufacturer instructions on combining with PGB. Additional samples of PGB, loose mix and bulk samples may be required during production of WMA for research purposes will be the responsibility of the producer. An outline of additional sampling will be provided during the pre-construction meeting.

43WMA.3. INSTALLATION:

- A. Environmental Requirements:
 - 1. Discontinue paving when surface temperatures fall below requirements listed in NYSDOT Table 401-2.
 - 2. Do not place asphalt concrete on wet surfaces, or if there is any indication of possible rain, or when weather conditions otherwise prevent the proper handling or finishing of bituminous mixtures as determined by the Engineer.
- B. Construct asphalt pavement in accordance with NYSDOT, Section 401-3.
- C. Manhole frames and other structures shall be adjusted to finished grade, if necessary, prior to placing of this paving course.
- D. When the conditions, equipment, plant and force is, in the opinion of the Engineer, proper for the work, the operation may proceed.
- E. Curbs and other structures shall be protected at all times from asphaltic materials and caution shall be taken to prevent damage to curbs and other structures by rollers and other equipment.
- F. The existing pavement shall be dry, protected from water that might run onto it, and properly installed. It shall be cleaned by hand and mechanical brushing and, if necessary, by flushing with a strong jet of clean water, and permitted to dry thoroughly before the truing and leveling course is laid. The existing pavement

shall be primed with approximately 0.3-0.7 gallon per square yard of asphalt emulsion tack coat.

- G. The tack coat shall only be sprayed on the existing pavement with a distributor pipe or a hose nozzle to control the rate of flow. Hand application shall not be permitted except by permission of the Engineer.
- H. To prevent equipment from picking up the tack coat it may be applied sparingly to just the areas requiring priming. Special consideration is to be given to the vertical surfaces of castings, curbs, and gutters.
- I. The materials shall be hauled to the site in steel bodied trucks and covered with tarpaulins to prevent cooling. Any truing and leveling material that is poorly mixed, separated, dirtied or cooled to a point of beginning to stiffen shall be rejected, and removed from the site.
- J. Unless otherwise permitted by the Engineer, the truing and leveling course shall be placed by means of a self-propelled paving machine, which compacts and extrudes the mixture to uniform density and to the desired cross section.
- K. After spreading, the mixture shall be thoroughly and uniformly compressed by a power-driven two wheel tandem roller weighing not less than ten (10) tons, as soon after being spread as it will bear the roller without undue displacement. Delays in rolling freshly spread mixture will not be tolerated. Rolling shall be longitudinal, starting at the sides and proceeding toward the center of the pavement, overlapping on successive trips. At intersections and other widened areas the pavement shall be subject to diagonal rolling in two directions.
- L. The speed of the roller shall not exceed three (3) miles per hour and shall at all times be slow enough to void displacement of the mixture. Any displacements occurring as a result of reversing the direction of the roller, or from any other cause, shall at once be corrected by the use of rakes and of fresh mixture where required. Rolling shall proceed continuously until all roller marks are eliminated and until the finished course shall have a density not less than ninety five (95) percent of the laboratory compacted density. If the truing and leveling course is being placed at a rate in exceeds of three hundred (300) square yards per hour, the Contractor shall use an extra roller. To prevent adhesion of the mixture to the roller, the wheels shall be kept properly moistened, but excess of either water or oil will not be permitted.
- M. Heated smoothing irons shall be used to finish the pavement along curbs, around manhole heads, and elsewhere where necessary.
- N. Traffic shall be kept off the surface until it is completely cooled and until it has set so that it will not be marked by traffic.

43WMA.4. MEASUREMENT AND PAYMENT:

- A. The quantity to be paid for under this item shall be the number of tons of truing and leveling course pavement measured in place in the completed course making no deductions for catch basins and manholes.
- B. The unit price bid for this item shall be full payment for furnishing all labor, equipment and materials including the preparation, the mixing, transportation, placing and rolling, necessary to complete the truing and leveling course as shown on the drawings and specified herein.

* * *

ITEM 51 - Furnish & Install Temporary Pavement

51.1. WORK INCLUDED:

- A. Under this item the Contractor shall furnish all materials, labor and equipment necessary to lay and maintain temporary pavement within roadways, driveways and walkways, and wherever ordered by the Engineer. Temporary pavement thickness shall be as shown on the detail drawings in.

51.2. MATERIALS:

- A. Asphaltic concrete shall be Binder Course Type 3, Item 403.13 as specified in Table 401-1 "Composition of Bituminous Plant Mixtures" of the latest New York State Department of Transportation Specifications.
- B. The material shall be hauled to the site in steel-bodied trucks and covered with tarpaulins to prevent cooling. Any asphaltic concrete that is poorly mixed, separated, dirtied, or cooled below 250 degrees Fahrenheit shall be rejected.

51.3. INSTALLATION:

- A. Environmental Requirements:
 - 1. Discontinue paving when surface temperatures fall below requirements listed in NYSDOT Table 401-2.
 - 2. Do not place asphalt concrete on wet surfaces, or if there is any indication of possible rain, or when weather conditions otherwise prevent the proper handling or finishing of bituminous mixtures as determined by the Engineer.
- B. Construct asphalt pavement in accordance with NYSDOT, Section 401-3.
- C. When ordered by the Engineer or after the newly installed utility lines have been tested and approved and the trench excavation has been backfilled and compacted as carefully as possible using good material, the top of the trench shall be rolled below the surface of the street. Then, asphaltic concrete shall be laid in the depression and rolled, with a power driven two-wheel tandem roller weighing not less than 10 tons. The surface shall be left raised about one half (1/2) inch above the adjacent pavement. As settlement takes place additional asphaltic concrete shall be added so that at no time will the surface be more than one (1) inch from the level of the adjacent pavement.
- D. All settlements of trenches shall be corrected within twelve (12) hours after notice by the Engineer. Overlays necessary to correct settlement are in addition to the depth specified on the contract drawings. Notice may be given orally to any agent, employee, or servant of the Contractor at the site of the permit work or by the telephone to any person answering at the office number listed by the

contractor. If for a period of four hours during the normal working day, reasonably diligent efforts on behalf of the Owner have failed to produce communication with anyone at said site or telephone number, the requirement of notice shall be deemed waived. However, if in the opinion of the Owner, the public health safety, and welfare is endangered he may intervene without notice. If Owner's forces have to do the necessary corrective work, the Owner will charge the Contractor for the labor, materials and equipment used plus an allowance for compensation and fringe benefits. The Owner reserves the right to charge the Contractor at overtime rates if the work cannot be accomplished during regular working hours without disrupting other scheduled work of the Owner's forces. The Owner also reserves the right to employ another Contractor to correct the condition. A Contractor who knows in advance that he will be unable to meet his obligation to maintain the trench may make arrangements in advance for correction of settled trenches by the Owner's forces by signing a release waiving notification.

- E. Temporary Pavement shall remain in place until removal and replacement is ordered by the Engineer.

51.4. MEASUREMENT:

- A. Measurement for this item shall be the square yard of temporary pavement laid and maintained as measured within a maximum payment limit. Said limit shall be one foot on each side from the outside edge of pipe or structure installed as shown on the drawings. Pavement placed outside the payment limit line shall not be measured or paid for regardless of the depth of the trench, soil conditions encountered, instability of the side slopes or condition of the existing pavement. The Contractor shall direct his operation, use the proper equipment and make ample allowance in his bid price for this item to allow for the above conditions.

51.5. PAYMENT:

- A. Payment shall be at the unit price bid, which shall include the cost of furnishing all materials, labor and equipment necessary to complete the work as specified herein, to compact the top of the trench, lay and maintain the temporary pavement for at least four months and until final pavement is ordered by the Engineer.
- B. Only one payment shall be made regardless of the number of additional layers of pavement necessary to maintain the trench, and regardless if such maintenance must be carried over the winter months.
- C. The Contractor is expected to reimburse the Owner directly for any bills rendered by the Owner in connection with corrective work described above. If bills are not paid promptly, the Owner may withhold the amount owing from any payment.

* * *

ITEM 51M - Cold Milling and Removal of Bituminous Pavements

51M.1. WORK:

- A. Under this item the Contractor shall furnish all labor, materials and equipment necessary to mill, shape and remove portions of existing pavement surfaces by a cold milling process, install joint sealer at all seams between any concrete slabs encountered below the asphalt surface within the areas indicated by the Engineer, utilizing equipment and procedures meeting the requirements as described in this specification.
- B. All materials removed during this milling process, including any foreign debris existing within or on the pavement, shall be disposed of by the Contractor.

51M.2. EQUIPMENT:

- A. The milling machine shall be especially designed and built for milling pavements or malls. It shall be self-propelled with a built-in conveyor. A separate conveyor loader immediately following the milling machine is also acceptable if the milling machine is not capable of self-loading. The milled material shall be picked up and discharged into a truck for removal.
- B. The machine shall be equipped with automatic grade and cross slope controls with independent sensors, and consist of a cutting drum with carbide tip cutting teeth that will produce a striated milled surface with the striations generally no deeper than three-eighths (3/8) of an inch.
- C. A mechanical vacuum type dust free sweeper, as approved by the Engineer, is to be furnished and used to immediately clean the milled surface of all loose material.
- D. Joint sealer for the concrete slab seams shall be an asphalt cement and polyester fiber compound, extruded by pressure into the joint between the existing concrete slabs.

51M.3. METHOD:

- A. The cold milling of the existing asphalt pavement is to be performed as ordered by the Engineer and in conjunction with the maintenance of traffic requirements of this project. The depth of milling shall vary from zero (0) to three and a half (3.5) inches.
- B. The Contractor shall cut keyways to blend the asphalt into the existing pavement at intersections and driveways as shown on the plans and as directed by the Engineer. Cuts shall be made by sawcutting, all asphalt shall be removed from the site.
- C. Areas not accessible to the milling machine such as around and/or adjacent to catch basins, manholes, valve boxes and curbs, may be removed and shaped by handwork or other methods approved by the Engineer. In general, except for the areas adjacent to curbs, this removal is to be performed immediately prior to the placement of the

new asphalt course. The milled material, including that removed by other means, shall be immediately removed from the roadway surface. The material shall become the property of the contractor and he shall be responsible for the removal and proper disposal of the material from the site.

- E. When working adjacent to traffic, extreme care is to be exercised to avoid spillage of milled material onto the traveled way. In the event that such a condition should occur, the contractor shall immediately remove the material and take immediate steps to correct the condition.
- F. No sharply defined drop-offs will be permitted within or between travel lanes carrying traffic which are attributable to milling.
- G. The milling operation shall be performed in such a manner that the milled areas shall be immediately cleaned thoroughly of all loose material, utilizing approved vacuum and mechanical type dust free sweepers, prior to opening to traffic. Any milled material that becomes wet and/or is not picked up by the vacuum sweeper shall be removed by the contractor before milling continues.
- H. If a concrete surface is encountered after the milling of the asphalt top course has been completed then both the transverse and the longitudinal seams between the existing concrete panels must be cleaned by means of air blasting. The sealant must then be extruded by pressure into the seam.**
- I. Cleaning shall again be performed, when directed by the Engineer, prior to the placement of the new asphalt concrete course.
- J. No milling shall be performed that will not provide adequate time for the placement of a new paving course in accordance with the seasonal limitations as indicated in the New York State Standard Specifications for asphalt paving.

51M.4. MEASUREMENT:

- A. The quantity to be paid for will be measured by the number of square yards of pavement surface removed by milling and/or other means in accordance with the plans, specifications, and orders of the Engineer.
- B. No deduction in area will be made for minor unmilled areas due to catch basins, manholes, and valve boxes located in the milled area.

51M.5. PAYMENT:

- A. The unit price bid per square yard shall include the cost of furnishing all labor and equipment necessary to complete the milling, including the removal of pavement by other means, the removal and disposal of milled material, the installation of joint sealer at concrete slab seams, and cleaning the resultant surface after milling and prior to the installation of a new wearing surface by brooming and vacuuming.

- B. Minor areas of heaved, shoved or high cement concrete pavement milled in order to maintain proper profile and cross slope and incidental to the milling of bituminous pavement shall be included in the unit price bid for this item.

* * *

ITEM 51WMA – WARM MIX ASPHALT (WMA) TOP COURSE

51WMA.1. WORK INCLUDED:

- A. Under this item the Contractor shall furnish all labor, materials and equipment necessary to condition existing pavement, apply tack coat and place a Warm Mix Asphalt (WMA) on top of the existing pavement course in accordance with the plans and specifications. The thickness of this top course will be as specified in the plans.

51WMA.2. MATERIALS:

- A. Milled pavement surface shall be conditioned as specified in NYSDOT Item 633.05, "Cleaning, Sealing and Filling Joints and Cracks."
- B. The tack coat shall be as specified in Section 407 of the State of New York Department of Transportation Specifications, latest revision.
- C. WMA will consist of a HMA mix design in production status and appropriate WMA production process approved by the Engineer. The WMA shall be produced below 275°F utilizing a HMA mix design in production status and an appropriate WMA Technology.
- D. Fabricate the HMA mix design as currently being produced, and the WMA mix design in the laboratory for a single point mix verification. Also fabricate specimens for Moisture Susceptibility testing as outlined in NYSDOT Standard Specifications, Materials Method 5.16 or Materials Method 5.13 regardless of aggregate sources. When fabricating WMA test specimens, be sure the design WMA additive is present, and the laboratory fabrication simulates the intended plant manufacture of the specific WMA technology utilized. Municipality personnel may be present during the fabrication and testing procedures. If the TSR of the WMA gyratory specimens is less than 80%, corrective action is required. When corrective action is necessary, any changes made to the design must be noted on the JMF, and all other volumetric and mechanical properties must be evaluated for compliance with requirements. After corrective action has been taken, retest the mixture according to this section.
- E. The Performance-Graded Binder (PG Binder) intended for use with the WMA Production process must be treated with the additive at the design dosage and certified to meet the grading requirements outlined in the contract documents. If a process to sample treated PG Binder is not available at the Production facility, samples of PG Binder accompanied by the WMA Additive, mixing recommendations, and MSDS sheets must be submitted for acceptance testing. If multiple PG Binder sources will be utilized, then each source needs to conform to the specification with the design dosage of the Warm Mix additive.
- F. The Municipality reserves the right to suspend any mixture design when the mixture demonstrates unacceptable paving quality or exhibits properties that will affect the anticipated pavement performance.

- G. The Quality Control requirements outlined in Section 401-3 of the State of New York Department of Transportation Specifications shall apply, with additional QC Plan revisions to address specific WMA process controls and are subject to approval by the Engineer. WMA Quality Control guidelines are available from the Materials Bureau.
- H. A mix design utilized as WMA will commence production under mix Verification Status as outlined in MM 5.16 regardless of the HMA JMF status. The six 1-quart PGB samples obtained from the plant will be either modified PGB for use in WMA production, or the design PGB accompanied by the WMA modifier with design dosage rate, MSDS, and manufacturer instructions on combining with PGB. Additional samples of PGB, loose mix and bulk samples may be required during production of WMA for research purposes will be the responsibility of the producer. An outline of additional sampling will be provided during the pre-construction meeting.

51WMA.3. INSTALLATION:

- A. A pre-construction meeting is required to review the provisions the specification and Quality control plan.
- B. Environmental Requirements:
 - 1. Discontinue paving when surface temperatures fall below requirements listed in NYSDOT Table 401-2.
 - 2. Do not place asphalt concrete on wet surfaces, or if there is any indication of possible rain, or when weather conditions otherwise prevent the proper handling or finishing of bituminous mixtures as determined by the Engineer.
- C. Construct asphalt pavement in accordance with NYSDOT, Section 401-3.
- D. The existing pavement shall be dry, protected from water that might run onto it, and properly installed. It shall be cleaned by hand and mechanical brushing and, if necessary, by flushing with a strong jet of clean water, and permitted to dry thoroughly before the top course is laid. Tack Coat shall be applied at a rate not less than 0.3-0.7 Gal/Sq. YD.
- E. Manhole frames and other structures shall be adjusted to finished grade, if necessary prior to placing of this paving course.
- F. When the conditions, equipment, plant and force is, in the opinion of the Engineer, proper for the work, the operation may proceed.
- G. Curbs and other structures shall be protected at all times from asphaltic materials and caution shall be taken to prevent damage to curbs and other structures by rollers and other equipment.

- H. The materials shall be hauled to the site in steel bodied trucks and covered with tarpaulins to prevent cooling. Any top course that is poorly mixed, separated, dirtied or cooled to a point beginning to stiffen shall be rejected and removed from the site.
- I. Unless otherwise permitted by the Engineer, the top course shall be placed by means of a mechanical spreader so operated that the mixture as spread, is free from lumps, of uniform density, and to the desired cross section.
- J. After spreading, the mixture shall be thoroughly and uniformly compressed by a power-driven two wheel tandem roller weighing not less than ten (10) tons, as soon after being spread as it will bear the roller without undue displacement. Delays in rolling a freshly laid mixture will not be tolerated. Rolling shall be longitudinal, starting at the sides and proceeding towards the center of the pavement, overlapping on successive trips. At intersections and other widened areas the pavement shall be subject to diagonal rolling in two directions.
- K. The speed of the roller shall not exceed three (3) miles per hour and shall at all times be slow enough to avoid displacement of the mixture. Any displacements occurring as a result of reversing the direction of the roller, or from any other cause shall at once be corrected by the use of rakes and of fresh mixture where required. Rolling shall proceed continuously until all roller marks are eliminated and until the finished course shall have a density not less than ninety-five (95) percent of the laboratory compacted density. If the top course is being placed at a rate in excess of three hundred (300) square yard per hour, the Contractor shall use an extra roller. To prevent adhesion of the mixture to the roller, the wheels shall be kept properly moistened, but excess of either water or oil will not be permitted.
- L. Heated smoothing irons shall be used for finish the pavement along curbs, around manhole heads and elsewhere where necessary.
- M. Traffic shall be kept off the surface until it is completely cooled and until it has set so that it will not be marked by traffic.
- N. A sixteen- (16) foot straight edge and four-foot carpenter's level shall be made available by the Contractor for testing. The Engineer shall be assured that the profile is true to one-quarter (1/4) inch, or the pavement shall be removed and re-laid. No surface patches are to be allowed.

51WMA.4. MEASUREMENT AND PAYMENT:

- A. The quantity to be paid for under this item shall per "ton" of top course pavement placed.
- B. The unit price bid for this item shall be full payment for furnishing all labor, equipment and materials, including the preparation and conditioning, the Tack Coat, the mixing, transportation, placing and rolling, necessary to complete the top course as shown on the drawings and specified herein.

* * *

ITEM 73 - Furnish & Install Control Backfill Material

73.1. WORK INCLUDED:

- A. Under this item the Contractor shall furnish and install control backfill material (K-Crete) as backfill material where ordered by the Engineer. Removal and disposal of excavated materials shall be included under this item.

73.2. MATERIAL:

- A. Control Backfill Material shall be in accordance with NYSDOT Item 502.95, Option B.
- B. The material supplied shall be a low strength concrete slurry commonly known as K-Crete. Any material supplied under this item shall be acceptable to the New York State Department of Transportation for use within state highway rights-of-way. This material shall have a minimum compressive strength of 50 psi.

73.3. INSTALLATION:

- A. The material shall be deposited into the trench from transit mix trucks. Care shall be taken to assure that the material fills in all voids.

73.4. MEASUREMENT:

- A. Measurement shall be by the cubic yard of material placed within the following pay limits upon the specific order of the Engineer. No deduction will be made for the volume of the pipe.
 - 1. Length - the length measurement shall be the actual length of trench ordered to be filled by the Engineer.
 - 2. Width - The width measurement shall be one foot on each side, outside the pipe or structure being installed irrespective of actual width of trench excavated.
 - 3. Depth - The depth measurement for material placed shall be the depth of the excavation to the invert of the pipe or bottom of a structure as ordered by the Engineer. In no case shall payment be made to depths excavated below those ordered by the Engineer. No payment shall be made for using Control Backfill Material to fill undercuts below the required grade when not ordered by the Engineer.

73.5. PAYMENT:

- A. Payment for this item shall be at the unit price bid for this item, which shall

include all labor, materials, and equipment necessary for furnishing and installing the Control Backfill Material. No additional payment shall be made for the removal and disposal of excavated materials.

* * *

ITEM 76 - MAINTENANCE AND PROTECTION OF TRAFFIC

76.1. WORK INCLUDED:

- A. Under this item the Contractor will be required to protect and maintain pedestrian and vehicular traffic.

76.2. METHOD:

- A. The Contractor shall maintain and protect traffic by conducting his construction operations so that the traveling public is subjected to a minimum of delay and no hazard.
- B. Procedures to be followed are as outlined herein and as required under Section 619 of the New York State Department of Transportation Specifications, latest edition.
- C. Residents along the existing roads and those having business along them shall have safe means of ingress and egress at all times. Traffic shall be maintained at the intersections of all roads or streets crossing the construction. Where directed by the Owner, the Contractor shall provide adequate and proper bridges over excavations as may be necessary or directed for the purpose of accommodating pedestrians or vehicles.
- D. In the event any portion of a public road must be closed to traffic, permission shall be secured by the Contractor from the Engineer, and notice must be given by the Contractor to the Police and Fire Departments, and adequate detour signs posted.
- E. Approved signs in accordance with the New York State Manual of Uniform Traffic Control Devices shall be provided along all streets while work is in progress. Where traffic direction is required, flagmen shall be designated by the Contractor to direct traffic past the equipment, machinery or construction operations. Construction equipment shall be removed entirely from the traveled roadway when work is shut down for the day and normal lanes of traffic shall be restored. Barricades shall be placed wherever the safety of the traveling public requires them, where a road is officially closed, where an excavation is being made, or where heavy construction equipment is operating. In addition, barricades shall be placed where they are deemed necessary, in the opinion of the Engineer or the Chief of Police, to direct traffic or to prevent entrance to streets or areas where construction is in progress.
- F. All protruding rebar, bolts, rods, etc. must be protected from pedestrian and/or vehicular traffic. Protection Safety caps (i.e. Econo-Guard) must be installed on all exposed ends.

- G. Barricades shall be in accordance with the New York State Manual of Uniform Traffic Devices and shall be lighted as provided therein. On traveled roads, a lighted warning sign is to be placed two hundred (200) feet before the approach of barricades, or as is necessary for safety along the approach line.
- H. Where trenches have been cut, barricades, red flags, and warning signs, all properly lighted, shall be placed at frequent intervals and maintained until the trenches have been properly backfilled and compacted.
- I. All barricades, lights, flags, and bombs shall be maintained intact at all times overnight, over the weekends, holidays or if the project is shut down for any period of time. This maintenance shall be included as part of the bid price for this item.
- J. Where steel plating over excavations is required, the plates shall be secured with sufficient spikes and blended into the existing pavement with either keyways or asphalt pavement. There shall be no exposed edges or corners of plates.
- K. If a NYSDOT permit is required for the work under this contract, the Contractor shall inform himself of all the rules, regulations and restrictions set forth by the NYSDOT permit concerning work within their right-of-way. If any of the Contractor's work is performed contrary to such laws, rules and regulations, he shall bear all resulting costs and fines.

76.3. PAYMENT:

- A. Payment shall be made at the lump sum bid price and shall include the cost of all personnel and the furnishing of all labor, materials and equipment necessary to protect and maintain pedestrian and vehicular traffic.

* * *

ITEM 102CB - CATCH BASINS

102CB.1. WORK INCLUDED:

- A. Under this item the Contractor shall furnish all labor, materials and equipment necessary to remove and dispose of existing catch basin, excavate and construct new catch basins and properly backfill and shall do all other work necessary for the complete installation of the catch basin as specified herein and as shown on the plans. This item shall also include the construction of catch basins over existing pipe and/or the modification of the existing drainage structures as shown on the plans.

102CB.2. MATERIALS:

- A. The walls shall be constructed of six (6) inch solid concrete catch basin blocks or may be precast. Precast catch basins shall meet all the structural requirements of ASTM-C-478, latest 4000 psi concrete. If the Contractor elects to supply precast units, shop drawings must be submitted to the Owner for approval prior to ordering.
- B. Frame, grate and hood shall be as shown on the detail drawings.

102CB.3. INSTALLATION:

- A. Excavation
 - 1. The Contractor shall cut and remove any asphalt paving curbs, drives, or other surface material required to make the excavations. The Contractor shall make all excavations in such a manner and to such widths as will provide ample room for properly installing the structure, and to permit the thorough compacting of the backfill material.
 - 2. The Contractor shall excavate a trench to the depth shown on the profiles and to a width of one (1) foot on each side of the outside of the structure. Hand excavation shall be employed wherever, in the opinion of the Engineer, it is necessary for the protection of existing utilities, trees, pavements or other structures, at no additional cost.
 - 3. The Contractor shall keep the trenches free from water. This shall be done as part of this item.
 - 4. Concrete pavement removal and Trench Rock is paid under its own item. Payment limit lines for these items at structure excavations shall be considered one foot outside the structure and to a depth six (6) inches below the bottom of the structure regardless of the amount of material removed.

5. The structure shall rest on suitable material and a stable bottom. If the soil encountered at the invert is unsuitable (i.e. soft, spongy, etc.) it shall be excavated and removed. Excavation shall be from a point one foot below the design invert of the structure to the bottom of the excavation for a width of one (1) foot on each side of the structure and to a depth as called for by the Engineer. There shall be no payment for the first foot of extra depth under the Miscellaneous Earth Excavation item. Payment for the first foot shall be included as part of this item. The Contractor shall replace the excavated material with No. 2 crushed stone, which shall be thoroughly compacted. Payment for this stone shall be under its own item. Payment of the excavation of the unstable bottom shall be under the Miscellaneous Earth Excavation item.
6. The Contractor shall provide adequate sheeting, bracing, and pumping of the excavation, whenever necessary to provide safe working conditions, prevent damage to pavement, structures, pipes and utilities or shifting of materials and shall be completely responsible for its adequacy and all damages resulting from its installation, removal, failure or omission. Such sheeting, shoring or bracing shall be included as part of this item.

B. Sheeting and Bracing

1. Trenches shall be properly sheeted, shored and braced as necessary to prevent shifting of materials, to prevent damage to structures, pavement and pipes and to provide safe working conditions. The Contractor shall be responsible for providing, installation of and for the adequacy of all sheeting and bracing used and for all damage resulting from its failure or from placing, maintaining and removing it. No payment will be made for sheeting and bracing if it is removed, or if it is left in place for the Contractor's convenience. If the sheeting and bracing is ordered to be left in place by the Engineer after having been constructed, the Contractor shall be entitled to the cost of materials so left in place.
2. If there is a space between the sheeting and the side of the trench, the space shall be backfilled with suitable material thoroughly compacted in place. Where adjacent structures, pavement or pipes may be damaged by the removal of sheeting, the Contractor shall not remove the sheeting all sheeting left in place shall be cut off at least two (2) feet below the surface of the ground. Where sheeting or shoring is to be removed, the removal shall be in such a manner as to prevent loss of ground.
3. The Contractor's attention is drawn to the NYS Dept. of Labor Industrial Code Rule #23 and O.S.H.A. regulations, which must be strictly adhered to. Prefabricated sheeting boxes may be used only with the approval of the Engineer as to the box itself and the method of use.

C. Construction

1. The catch basin shall rest on a foundation of a minimum of six (6) inches of crushed stone, Size 2 of Table 703-4 of the New York State Department of Transportation Specification, latest revision. The base piece shall be properly aligned to receive the pipe. The proper number of barrel sections shall be placed so that adjustment to final grade shall be less than one (1) foot of brick and mortar leveling course. The barrels shall be plumb and properly aligned so that the steps form a continuous ladder.
2. All pipes extending inside catch basin shall be cut flush with the interior wall of catch basin.
3. The frame and grate shall be provided and installed with the frame set to true grade in a full bed of brick mortar. All rims to be set at (Binder Course) pavement grade until final pavement course is placed. If base course will be used for longer than 3 weeks, rims will be set to this grade & then raised as necessary upon each successive asphalt course. Catch Basins should include neoprene coated aluminum rungs installed at 12 inches on center and the structures shall be certified by the manufacturer for H2O loading.

D. Backfill

1. After the catch basin has been properly constructed and inspected, the space between the walls of the catch basin and the sides of the trench shall be backfilled and compacted in nine-inch layers. Water may be required by the inspector to be added to the backfill material, to insure its compaction to a degree at least equal to that of the surrounding earth. No stones larger than two (2) cubic feet shall be allowed in the backfill within three (3) feet from the sides of the catch basin.
2. Excess material shall be removed from the site, unsuitable backfill material shall be removed from the site and replaced with suitable backfill as determined by the Engineer.

102CB.4. MEASUREMENT:

- A. The measurement for this item shall be the unit "each" for the catch basins. The measurement shall be for each catch basin irrespective of the individual depths or type of catch basin.

102CB.5. PAYMENT:

- A. Payment shall be at the unit price bid for completed, ready for use, accepted catch basin, constructed as specified herein. Said payment shall be for providing all labor, materials and equipment for sheeting and shoring, crushed stone bedding, maintaining excavation, construction and backfilling, and removal and disposal of existing catch basin and excavated material.

* * *

ITEM 102MC - Furnish & Install Precast Concrete Manhole

102MC.1. WORK INCLUDED:

- A. Under this item the Contractor shall furnish all labor, materials and equipment necessary to excavate and place a precast concrete manhole, with frame and cover, steps and properly backfill, all in accordance with the drawings and these specifications.

102MC.2. MATERIALS:

- A. Precast manhole sections shall be manufactured in accordance with ASTM Designation C478-latest. The minimum compressive strength of the concrete for all sections shall be 4000 psi.
- B. Manhole reinforcing shall be as called for on the drawings.
- C. Alternate designs varying in detail, may be submitted for approval by the Engineer, but the Engineer reserves the right to enforce the provision of these specifications.
- D. Shallow precast manholes (those 6 feet and under from cover to invert) shall be built with a flat slab at the top as shown on the plans.
- E. Manholes over 6 feet in depth shall be built with an eccentric cone section at the top unless otherwise directed on the plans.
- F. Joints
 - 1. The joints of the manhole sections shall be formed entirely of concrete employing a rubber gasket and when assembled, shall be self-centering and make a uniform watertight joint.
 - 2. Rubber gaskets shall be installed in accordance with the manufacturer's instructions. The rubber shall be of the type that resists sewage and industrial waste acids.
- G. Exterior Coating for Manholes
 - 1. The exterior surface of each section shall be double coated with a coal tar epoxy type coating as manufactured by TNEMEC Co, Tnemec-Tar 46; Porter Coatings, Tarmastic 100; or equal. Final dry mils thickness shall be a minimum of 18 mils.
- H. Frame and Cover
 - 1. The frame and cover shall be as shown on the drawings. Frames and covers shall be machine ground to a true fit. If called for on the plans, the cover may

be solid without air vents or may require a complete ring gasket of heavy roofing paper or shall be set in the frame with the use of a rubber gasket.

I. Steps

1. Steps shall be of the type and material shown on the plans, and set 12 to 15 inches on center, the full depth of the manhole, and securely embedded in the wall.

102MC.3. INSTALLATION:

A. Excavation

1. The Contractor shall cut and remove any asphalt paving curbs, drives, or other surface material required to make the excavations. The contractor shall remove and dispose of existing drainage structures, as per plan. The Contractor shall make all excavations in such a manner and to such widths as will provide ample room for properly installing the manhole, and to permit the thorough compacting of the backfill material.
2. The Contractor shall excavate a trench to the depth shown on the profiles and to a width of one (1) foot on each side of the outside of the manhole. Hand excavation shall be employed wherever, in the opinion of the Engineer, it is necessary for the protection of existing utilities, trees, pavements or other structures, at no additional cost.
3. The Contractor shall keep the trenches free from water. This shall be done as part of this item.
4. Concrete pavement removal and Trench Rock is paid under its own item. Payment limit lines for these items at manhole excavations shall be considered one foot outside the structure and to a depth six (6) inches below the bottom of the structure regardless of the amount of material removed.
5. The structure shall rest on suitable material and a stable bottom. If the soil encountered at the invert is unsuitable (i.e. soft, spongy, etc.) it shall be excavated and removed. Excavation shall be from a point one foot below the design invert of the structure to the bottom of the excavation for a width of one (1) foot on each side of the manhole and to a depth as called for by the Engineer. There shall be no payment for the first foot of extra depth under the Miscellaneous Earth Excavation item. Payment for the first foot shall be included as part of this item. The Contractor shall replace the excavated material with No. 2 crushed stone, which shall be thoroughly compacted. Payment for this stone shall be under its own item. Payment of the excavation of the unstable bottom shall be under the Miscellaneous Earth Excavation item.
6. The Contractor shall provide adequate sheeting, bracing, and pumping of the excavation, whenever necessary to provide safe working conditions, prevent

damage to pavement, structures, pipes and utilities or shifting of materials and shall be completely responsible for its adequacy and all damages resulting from its installation, removal, failure or omission. Such sheeting, shoring or bracing shall be included as part of this item.

B. Sheeting and Bracing

1. Trenches shall be properly sheeted, shored and braced as necessary to prevent shifting of materials, to prevent damage to structures, pavement and pipes and to provide safe working conditions. The Contractor shall be responsible for providing, installation of and for the adequacy of all sheeting and bracing used and for all damage resulting from its failure or from placing, maintaining and removing it. No payment will be made for sheeting and bracing if it is removed, or if it is left in place for the Contractor's convenience. If the sheeting and bracing is ordered to be left in place by the Engineer after having been constructed, the Contractor shall be entitled to the cost of materials so left in place.
2. If there is a space between the sheeting and the side of the trench, the space shall be backfilled with suitable material thoroughly compacted in place. Where adjacent structures, pavement or pipes may be damaged by the removal of sheeting, the Contractor shall not remove the sheeting all sheeting left in place shall be cut off at least two (2) feet below the surface of the ground. Where sheeting or shoring is to be removed, the removal shall be in such a manner as to prevent loss of ground.
3. The Contractor's attention is drawn to the NYS Dept. of Labor Industrial Code Rule #23 and O.S.H.A. regulations, which must be strictly adhered to. Prefabricated sheeting boxes may be used only with the approval of the Engineer as to the box itself and the method of use.

C. Construction

1. Each section of the precast manhole shall have not more than two (2) holes for the purpose of handling and laying. These holes shall be tempered and shall be plugged with rubber stoppers or mortar after installation.
2. The manhole sections shall be properly handled to avoid chopping, cracking or breaking. Sections damaged in transit or construction shall be replaced by the Contractor at no additional cost to the Owner.
3. The precast manhole base (see base option below) shall rest on a foundation of a minimum of six (6) inches of crushed stone, Size 2 of Table 703-4 of the New York State Department of Transportation Specification, latest revision. The base piece shall be properly aligned to receive the pipe. The proper number of various heights of the barrel shall be placed so that adjustment to final grade shall be less than one foot of brick and mortar leveling course. The

barrels shall be plumb and properly aligned so that the steps form a continuous ladder.

4. The Contractor is responsible for the alignment of the holes in the precast manhole base piece for the pipe to enter. If the manhole is relocated in the field the Contractor shall realign the holes in the base section as part of this item and at no additional cost to the Owner.
5. The Contractor may in place of a precast base section substitute with the approval of the Engineer, a concrete base and build it up with concrete manhole blocks eight inches above the pipe so as to provide a solid foundation for the precast barrel sections.

D. Backfill

1. After the manhole has been properly constructed and inspected, the space between the walls of the manhole and the sides of the trench shall be backfilled and compacted in nine inch layers. Water may be required by the inspector to be added to the backfill material, to insure its compaction to a degree at least equal to that of the surrounding earth. No stones larger than two (2) cubic feet shall be allowed in the backfill within three (3) feet from the sides of the manhole.
2. Excess material shall be removed from the site, unsuitable backfill material shall be removed from the site and replaced with suitable backfill as determined by the Engineer.

E. Manhole Connection

The circular opening left in the wall of the precast manhole to accept the pipe shall have a beveled edge on the outside wall of the manhole. The bevel shall be adequate to permit the pipe to swing laterally or vertically several degrees before the pipe touches the concrete. The beveled surface should be smooth and free of imperfections. The circular opening shall have a rubber gasket cast into the concrete to make the connection watertight. All gaskets shall be fabricated from a high-grade rubber compound. All gaskets shall conform to ASTM C-443-76, or latest revision.

- (a) The circular opening left in the wall of the precast manhole to accept the pipe shall have a beveled edge on the outside wall of the manhole. The bevel shall be adequate to permit the pipe to swing laterally or vertically several degrees before the pipe touches the concrete. The beveled surface should be smooth and free of imperfections. The space between the pipe and the manhole walls shall be filled a structurally sound and watertight patch, using non-shrink concrete and an asphalt waterproofing compound.

102MC.4. MEASUREMENT:

- A. The measurement for this item shall be the unit "each" for the manholes. The measurement shall be for each manhole irrespective of the individual depths or type of manhole.

102MC.5. PAYMENT:

- A. Payment shall be at the unit price bid for completed, ready for use, accepted manhole, constructed as specified herein. Said payment shall be for providing all labor, materials and equipment for sheeting and shoring, crushed stone bedding, maintaining excavation, removal and disposal of existing drainage structures, construction, bench and trough construction, backfill and testing of the manholes.

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ITEM 103 - CONNECTION TO EXISTING STORM STRUCTURES

103.1. WORK INCLUDED

- A. Under this item the Contractor shall furnish all labor, materials and equipment necessary to connect the new work into the existing structure.

103.2. METHOD

- A. The Contractor shall make such excavation at the pipe or drainage structure as may be required to make the connection. An opening shall be carefully made into the existing pipe or drainage structure, of size sufficient to receive the new work.
- B. The Contractor shall exercise reasonable care in opening the existing pipe or drainage structure. The Contractor will be completely responsible for and shall be required to repair any resulting damage to the existing facilities, with no cost to the Owner.
- C. Upon completion of the opening the Contractor shall make the connection to the existing pipe or drainage structure, and shall make such modifications to the manhole or structure as may be required to provide a smooth finished invert in accordance with the specifications. The installation of LINK-SEAL, or equal, is required in the opening.
- D. After the invert has been completed, the pipe and drainage structure shall be repaired to provide a structurally sound and water tight patch, using non-shrink concrete and an asphalt waterproofing compound if necessary.
- E. The outlet of the new sewer shall be plugged and shall remain plugged until removal of plug is permitted by the Engineer.

103.3. MEASUREMENT AND PAYMENT:

- A. Payment for this item shall be for each connection so made and shall include the cost of all labor, materials and equipment necessary to connect the new work with the existing storm sewer line, as outlined herein to provide a complete and ready to use installation.

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