



City of Marlborough, Massachusetts

Contract and Specifications

for the

Reconstruction of

Various Streets

And Appurtenant Work

Contract ED 2011-12

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NOTICE TO BIDDERS

Sealed bids for CONTRACT NO. ED 2011-12 for the Reconstruction of Various Streets and Appurtenant Work in Marlborough, Massachusetts will be received at the Office of the City Engineer, Department of Public Works, Municipal Garage, 135 Neil Street, Marlborough, Massachusetts 01752 Tel. No. (508) 624-6910, Extension 7200 until **9:00 A.M. on Thursday, June 30, 2011** at which time they will be opened and read aloud. Envelopes containing bids must be plainly marked on the lower left corner as a **BID PROPOSAL** with the date and time of the bid opening.

All bids for this project are subject to M.G.L., Ch. 30, §39M, Ch. 43, §28, and Ch. 62, §49-A (REAP).

Specifications, plans and copies of the contract documents to be used may be obtained at the Engineering Division of the Department of Public Works, Municipal Garage, 135 Neil Street, Marlborough, MA. A **non-refundable fee** of \$30.00 in check or money order payable to the City of Marlborough, MA will be required for each set of the Contract Documents. An additional fee of **\$5.00** is to be included in the check or money order if the bid package is to be mailed.

Each bid must be accompanied by a bid deposit in the form of a Bid Bond, or cash, or a certified check, or a treasurer's or cashier's check, issued by a responsible bank or trust company, payable to the City of Marlborough in the amount of 5% of the contract bid price.

A Performance and a Labor and Materials Payment Bond, each in the amount of 100% of the contract price, will be required of the successful bidder upon the signing of the contract.

Insurance certificates indicating coverage for public liability, property damage and workman's compensation, in accordance with the contract requirements must be filed by the successful bidder upon the signing of the contract.

The Contract must comply with the most current Schedule of Minimum Wage Rates established by the Massachusetts Department of Labor and Industries for the contract work, a recent list of which is included in the contract documents. The higher of the federal and state wage rates per category shall apply.

Equal opportunity and affirmative action in employment shall apply. In accordance with the provisions of a supplemental EEO/AA and anti-discrimination program included in the contract documents, the successful bidder, as part of its obligation of remedial action, must agree to a contractual obligating that affirms its willingness to maintain on the project a not less than five percent (5%) ratio of minority employee man hours in each job category.

In accordance with the provisions of applicable statues, laws, rules, regulations, ordinances and the City of Marlborough's Minority and Women's Business Enterprise (MBE/WBE) Program, all qualified contractors will receive consideration without regard to race, color, creed, religion, sex or national origin.

Bidders are invited to a Pre-Bid Conference at the Engineering Division on **Thursday, June 23, 2011 at 9:00 A.M.** to discuss the work. Further questions can be discussed by contacting the Engineering Division at (508) 624-6910 Extension 7200.

The City reserves the right to reject any and all bids or parts thereof.

CITY OF MARLBOROUGH
DEPT. OF PUBLIC WORKS

BY: Thomas E. Cullen Jr., P.E.
City Engineer

Bidding Requirements

**CITY OF MARLBOROUGH, MASSACHUSETTS
PROCUREMENT OFFICE**



**GENERAL CONDITIONS
OF THE BID**

1.1 The City of Marlborough will consider only responsive bids from responsible Contractors for a contract award. A responsive bid is one which complies fully with all submission requirements stated in these bid/contract documents. A responsible Contractor is one who demonstrably possesses the skill, ability, and integrity necessary to faithfully perform the work called for in this procurement, judged on the basis of information about the Contractor's experience, performance on recent and current projects and appropriate references.

1.2 A bidder may correct, modify, or withdraw a proposal by written notice received in the office of the City Engineer, Municipal Garage, Department of Public Works, 135 Neil Street, Marlborough, MA 01752 prior to the date and time set for opening proposals. After the bids are opened, a bidder may not change the price or any other provision of the bid in a manner prejudicial to the interest of the City or to fair competition. The City may waive minor informalities to allow the bidder to correct them. If a mistake and the intended offer are clearly evident on the face of the proposal, the City of Marlborough may correct the mistake to reflect the intended correct offer and so notify the bidder in writing. The bidder may not withdraw a proposal if a mistake is clearly evident on the face of the proposal, but the intended correct offer is not similarly evident.

1.3 Each bid submitted in response to these bid/contract documents is subject to all contract terms and conditions included herein, and any contract awarded will incorporate all of these contract terms.

1.4 All bidders are required to visit the site and examine all documents included in these bid/contract documents or referred to herein. The City of Marlborough will not be responsible for errors, omissions, or charges for extra work arising from any failure by the proposer to familiarize itself with the bid/contract documents and existing conditions. Submission of a bid constitutes an acknowledgement that the bidder has examined the site and the bid/contract documents, that the bidder is familiar with them, and the documents are adequate and that the bidder will produce the required results.

1.5 The City shall award a contract by written notice to the selected bidder no later than 60 days following the opening of the bids, unless such time is mutually extended.

1.6 The award of a contract is subject to execution by the Contractor within 5 days of the date of the award and submission of the bonds required within, each from a surety company qualified to do business under the laws of the Commonwealth and in a form acceptable to the City of Marlborough.

1.7 All inquiries concerning these bid/contract documents or regarding classifications must be in writing and must be submitted to: City Engineer, Department of Public Works, 135 Neil Street, Marlborough, MA 01752. If necessary, an addendum will be issued to all holders of this bid. Inquiries must be received no later than five business days prior to the bid opening. Inquiries received after that time will not be answered.

1.8 The work will be substantially completed no later than **60 calendar days** following receipt by the Contractor of a Notice to Proceed from the City. Liquidated damages, but not as a penalty, will be assessed at a rate of \$500.00 per calendar day beyond the date indicated.

1.9 No payments will be made for any extra charges such as shipping or delivery.

1.10 The City is exempt from Massachusetts Sales Tax and no bid shall include same. The Contractor may contact the City Auditor for information on what forms are needed to purchase supplies without payment of the tax.

1.11 The successful bidder will indemnify the City from harm to any of its employees, the City's employees or members of the public by providing evidence of personal and vehicular liability and property damage insurance coverage in the amount specified in the Contract Form section.

1.12 The bidder shall include a bid deposit in the amount of five percent (**5%**) of the proposed cost in the form of a cashier's check, a certified check, a bank treasurer's check or a bond issued by a surety company licensed by the Commonwealth's Division of Insurance. Bonds must be original and all dates must be completed. All checks will be held until the contract is awarded at which time they will be returned.

1.13 The successful bidder will be required to post a Performance Bond in the amount of one hundred percent (100%) of the total proposed cost. The successful bidder will also be required to post a Labor and Materials payment bond in the amount of one hundred percent (100%) of the total proposed cost. Execution of a contract will be conditioned on producing said bonds, which must be issued by a surety company licensed by the Commonwealth's Division of Insurance and which must be acceptable to the City. Bonds must be original and all dates completed.

1.14 The specifications within require the performance of all things necessary, proper for or incidental to the provision of services or supplies specified herein. Any services mentioned in these specifications and all things not specified herein, but involved in carrying out their intent, and the complete and proper execution of the services are required by these specifications; the Contractor shall perform same as though they were specifically described and mentioned.

1.15 The successful Contractor will not be permitted to assign or underlet the contract, or assign either legally or equitably, any monies hereunder, or its claim thereto, without the previous written consent from the City as provided in the attached contract.

1.16 Evidence of prior experience must be submitted to the City prior to the award of a contract the successful bidder.

The Contractor that performs the substantive portion of the principal work described in the specifications must have a documentable record of at least five (5) years of reliable performance in the reconstruction of roadways, and must submit references to substantiate it is a “responsible and eligible bidder” as defined in M.G.L. Ch. 30, §39M by providing a complete list of all Massachusetts communities for which the company has provided similar services, including contract amounts, names and telephone numbers of contact officials. If experience is less than five years, the Contractor shall provide similar information for private sector companies for which the Contractor has provided similar projects.

1.17 The Contractor must have successfully completed at least one contract for a project similar in scope, size, and complexity to the work specified herein and must identify a reference for same.

1.18 The Contractor will supply evidence of all required insurance prior to execution of a contract, and agrees to indemnify and hold harmless the City for any non-payments of the wages required by M.G.L. Ch. 149, §26 to 27.

**Form of
General Bid**

CONTRACT NO. ED 2011-12

A. PROPOSAL

The undersigned hereby declares to have carefully examined the conditions affecting the cost of work, and agrees to make provisions and payment for all materials, labor, and all services and facilities of every nature whatsoever necessary to execute the work and to complete in every respect the work as detailed in the bid/contract documents.

The work shall be done in accordance with the following bids/contract documents prepared by the architect or engineer listed below:

Plans and Specifications

City of Marlborough, Massachusetts Contract and Specifications for the Reconstruction of Various Streets and Appurtenant Work in Marlborough, MA Contract ED 2011-12

City Engineer

Thomas E. Cullen, Jr., P.E.
Municipal Garage – 135 Neil Street
Marlborough, MA 01752

B. EXECUTION OF CONTRACT AND BONDS

The undersigned agrees that if he/she is selected as Contractor he will within five (5) days (Saturdays, Sundays, and legal holidays excluded), after presentation thereof, by the awarding authority, execute a contract in accordance with the terms of this bid and furnish a Performance Bond and also a Labor and Materials or Payment Bond, each of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the awarding authority and each in the sum of one hundred percent (100%) of the contract price, the premiums for which are to be paid by the general Contractor and are included in the contract price.

C. HARMONY

In accordance with M.G.L. Ch. 30, §39M(c), as amended, the undersigned hereby certifies that he/she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work.

D. CERTIFICATES

Attached or included herein, as part of these contract documents, are the following completed forms or required items:

- Form for General Bid including Bid Sheet (Certified)
- Bidder Information Sheet
- Statement of Bidder's Qualifications (Certified)
- Bid Bond (Certified)
- Non-Collusion Affidavit
- Certification of taxes filed & paid/Unemployment Contribution (Certified)
- Certificate of Vote (Certified)

E. ESTIMATES

The Bidder agrees to perform all work described in the bid/contract documents for the lump sum and unit prices listed on the following pages. All estimated quantities are assumed for comparison of bids.

SUPPLEMENTAL FORM FOR GENERAL BID

CITY OF MARLBOROUGH, MASSACHUSETTS

RECONSTRUCTION OF VARIOUS STREETS

AND APPURTENANT WORK

CONTRACT ED 2011-12

- BERKLEY STREET -

Item No.	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
		Brought Forward				
120.1	260	UNCLASSIFIED EXCAVATON at PER CUBIC YARD				
121.	20	CLASS A ROCK EXCAVATION at PER CUBIC YARD				
129.	2400	BITUMINOUS CONCRETE EXC. BY COLD-PLANER at PER SQUARE YARD				
141.1	14	TEST PIT FOR EXPLORATION at PER CUBIC YARD				
142.	105	CLASS B TRENCH EXCAVATION at PER CUBIC YARD				
144.	20	CLASS B ROCK EXCAVATION at PER CUBIC YARD				

SUBTOTAL PAGE 1

146.	4	DRAINAGE STRUCTURE REMOVED AND DISPOSED at EACH				
151.01	235	GRAVEL BORROW TYPE C at PER CUBIC YARD				
156.	10	CRUSHED STONE FOR DRAINAGE, REJET. AND W.W. FOUNDATIONS at PER TON				
170.	2350	FINE GRADING AND COMPACTING - SUBGRADE AREAS at PER SQUARE YARD				
170.1	1000	FINE GRADING AND COMPACTING - OTHER THAN SUBGRADE AREAS at PER SQUARE YARD				
201.5	5	CATCH BASIN (MUNICIPAL STANDARD) at EACH				
210.1	1	SANITARY SEWER MANHOLE (MUNICIPAL STANDARD) at EACH				
220.8	5	SANITARY STRUCTURE REMODELED at EACH				

SUBTOTAL PAGE 2

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222.01	2	FRAME AND GRATE OR COVER (MUNICIPAL STANDARD) at EACH				
223.1	1	FRAME AND GRATE OR COVER REMOVED AND STACKED at EACH				
224.12	5	12" HOOD at EACH				
241.12	200	12-INCH REINFORCED CONCRETE PIPE at PER LINEAR FOOT				
247.081	1	8x8x6 P.V.C. "Y" at EACH				
250.06	30	6" PVC SANITARY PIPE at PER LINEAR FOOT				
250.08	130	8" PVC SANITARY PIPE at PER LINEAR FOOT				
347.075	15	3/4 IN. COPPER TUBING-TYPE K at PER LINEAR FOOT				

SUBTOTAL PAGE 3

358.	6	GATE BOX ADJUSTED at EACH				
363.075	1	3/4 IN. CORPORATION COCK at EACH				
381.	1	SERVICE BOX at EACH				
384.	1	CURB STOP at EACH				
384.2	17	CURB STOP REMOVE AND RESET at EACH				
403.	2100	RECLAIMED BASE COURSE at PER SQUARE YARD				
420.	350	CLASS I BITUMINOUS CONCRETE BINDER COURSE, TYPE I-1 at PER TON				
440.	6000	CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL at PER POUND				

SUBTOTAL PAGE 4

460.	400	CLASS I BITUMINOUS CONCRETE PAVEMENT TYPE I-1 at PER TON				
464.	250	BITUMEN FOR TACK COAT at PER GALLON				
470.2	1350	CLASS I BIT. CONC. BERM-TYPE A (MODIFIED) at PER LINEAR FOOT				
482.2	550	HOT POURED JOINT SEALER at PER LINEAR FOOT				
482.3	550	SAWING BITUMINOUS CONCRETE at PER LINEAR FOOT				
697.1	2	SILTATION SACK at EACH				
703.	60	BITUMINOUS CONCRETE DRIVEWAY at PER TON				
715.	2	RURAL MAILBOX REMOVED AND RESET at EACH				

SUBTOTAL PAGE 5

748.	1	MOBILIZATION at LUMP SUM				
751.	100	LOAM BORROW at PER CUBIC YARD				
765.	1000	SEEDING at PER SQUARE YARD				
851.	1	SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS at LUMP SUM				
852.	112	SAFETY SIGNING FOR CONSTRUCTION OPERATIONS at PER SQUARE FOOT				
874.	2	STREET NAME SIGN INCLUDING POST at EACH				
874.3	1	REGULATORY SIGN ON STEEL POST at PER SQUARE FOOT				
874.5	2	MISC. SIGNS REMOVED AND RESET at EACH				

SUBTOTAL PAGE 6

999.1	20	POLICE SERVICES at ALLOWANCE	\$2,500	.00		
999.2	20	RELOCATING OBSTRUCTING UTILITIES at PER LINEAR FOOT				

SUBTOTAL PAGE 7

SUBTOTAL PAGE 7

SUBTOTAL PAGE 6

SUBTOTAL PAGE 5

SUBTOTAL PAGE 4

SUBTOTAL PAGE 3

SUBTOTAL PAGE 2

SUBTOTAL PAGE 1

BERKLEY STREET TOTAL BASE BID PRICE

AWARD SHALL BE BASED ON BASE BID

SUPPLEMENTAL FORM FOR GENERAL BID
CITY OF MARLBOROUGH, MASSACHUSETTS

**RECONSTRUCTION OF VARIOUS STREETS
AND APPURTENANT WORK
CONTRACT ED 2011-12
- EDINBORO STREET -**

Item No.	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
		Brought Forward				
127.	5	CONCRETE EXCAVATION at PER CUBIC YARD				
129.	6700	BITUMINOUS CONCRETE EXC. BY COLD-PLANER at PER SQUARE YARD				
151.01	40	GRAVEL BORROW TYPE C at PER CUBIC YARD				
153.	40	CONTROLLED DENSITY FILL EXCAVATABLE at PER CUBIC YARD				
170.	55	FINE GRADING AND COMPACTING - SUBGRADE AREAS at PER SQUARE YARD				
170.1	330	FINE GRADING AND COMPACTING - OTHER THAN SUBGRADE AREAS at PER SQUARE YARD				

SUBTOTAL PAGE 1

220.	2	DRAINAGE STRUCTURE ADJUSTED at EACH				
220.7	2	SANITARY STRUCTURE ADJUSTED at EACH				
222.2	1	FRAME AND GRATE MDPW CASCADE TYPE at EACH				
223.1	1	FRAME AND GRATE OR COVER REMOVED AND STACKED at EACH				
347.075	240	3/4 IN. COPPER TUBING-TYPE K at PER LINEAR FOOT				
358.	3	GATE BOX ADJUSTED at EACH				
363.075	12	3/4 IN. CORPORATION COCK at EACH				
381.	12	SERVICE BOX at EACH				
384.	12	CURB STOP at EACH				

SUBTOTAL PAGE 2

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460.	600.	CLASS I BITUMINOUS CONCRETE PAVEMENT TYPE I-1 at PER TON				
464.	340	BITUMEN FOR TACK COAT at PER GALLON				
472.	5	CLASS I BIT. CONC. MIXTURE (VARIOUS) at PER TON				
482.3	30	SAWING BITUMINOUS CONCRETE at PER LINEAR FOOT				
701.	20	CONCRETE SIDEWALK at PER SQUARE YARD				
702.	10	BITUMINOUS CONCRETE WALK SURFACE at PER TON				
703.	30	BITUMINOUS CONCRETE DRIVEWAY at PER TON				
748.	1	MOBILIZATION at LUMP SUM				
751.	50	LOAM BORROW at PER CUBIC YARD				

SUBTOTAL PAGE 3

765.	325	SEEDING at PER SQUARE YARD				
851.	1	SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS at LUMP SUM				
852.	96	SAFETY SIGNING FOR CONSTRUCTION OPERATIONS at PER SQUARE FOOT				
999.1	1	POLICE SERVICES at ALLOWANCE	\$1,000	.00		

SUBTOTAL PAGE 4

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SUBTOTAL PAGE 4

SUBTOTAL PAGE 3

SUBTOTAL PAGE 2

SUBTOTAL PAGE 1

EDINBORO STREET TOTAL BASE BID PRICE

AWARD SHALL BE BASED ON BASE BID

SUPPLEMENTAL FORM FOR GENERAL BID

CITY OF MARLBOROUGH, MASSACHUSETTS

RECONSTRUCTION OF VARIOUS STREETS

AND APPURTENANT WORK

CONTRACT ED 2011-12

- GATES AVENUE -

Item No.	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
		Brought Forward				
105.43	1	TREE REMOVED (INCL. STUMP) DIA. 24 IN. AND OVER at EACH				
120.1	100	UNCLASSIFIED EXCAVATON at PER CUBIC YARD				
121.	100	CLASS A ROCK EXCAVATION at PER CUBIC YARD				
127.	40	CONCRETE EXCAVATION at PER CUBIC YARD				
141.1	14	TEST PIT FOR EXPLORATION at PER CUBIC YARD				
144.	20	CLASS B ROCK EXCAVATION at PER CUBIC YARD				

SUBTOTAL PAGE 1

151.01	160	GRAVEL BORROW TYPE C at PER CUBIC YARD				
151.22	50	GRAVEL BORROW FOR SIDEWALKS at PER CUBIC YARD				
170.	1000	FINE GRADING AND COMPACTING - SUBGRADE AREAS at PER SQUARE YARD				
170.1	700	FINE GRADING AND COMPACTING - OTHER THAN SUBGRADE AREAS at PER SQUARE YARD				
220.5	2	DRAINAGE STRUCTURE REMODELED at EACH				
220.8	2	SANITARY STRUCTURE REMODELED at EACH				
222.01	2	FRAME AND GRATE OR COVER (MUNICIPAL STANDARD) at EACH				
223.1	2	FRAME AND GRATE OR COVER REMOVED AND STACKED at EACH				

SUBTOTAL PAGE 2

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302.04	10	4 IN. DUCTILE IRON WATER PIPE CEM. LINED (RUBBER GASKET) at PER LINEAR FOOT				
302.06	45	6 IN. DUCTILE IRON WATER PIPE CEM. LINED (RUBBER GASKET) at PER LINEAR FOOT				
347.075	150	3/4 IN. COPPER TUBING-TYPE K at PER LINEAR FOOT				
350.06	1	6 INCH GATE AND GATE BOX at EACH				
358.	1	GATE BOX ADJUSTED at EACH				
361.066	1	6"x6" TEE at EACH				
362.041	1	4"x6" REDUCER at EACH				
363.075	5	3/4 IN. CORPORATION COCK at EACH				

SUBTOTAL PAGE 3

371.04	1	4 IN. MECHANICAL COUPLING at EACH				
376.	1	HYDRANT at EACH				
376.1	1	HYDRANT-REMOVED AND STACKED at EACH				
381.	5	SERVICE BOX at EACH				
384.	5	CURB STOP at EACH				
384.2	5	CURB STOP ADJUSTED at EACH				
403.	900	RECLAIMED BASE COURSE at PER SQUARE YARD				
420.	145	CLASS I BITUMINOUS CONCRETE BINDER COURSE, TYPE I-1 at PER TON				
440.	1500	CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL at PER POUND				

SUBTOTAL PAGE 4

460.	85	CLASS I BITUMINOUS CONCRETE PAVEMENT TYPE I-1 at PER TON				
464.	50	BITUMEN FOR TACK COAT at PER GALLON				
482.2	200	HOT POURED JOINT SEALER at PER LINEAR FOOT				
482.3	200	SAWING BITUMINOUS CONCRETE at PER LINEAR FOOT				
482.4	40	SAWING CEMENT CONCRETE at PER LINEAR FOOT				
570.3	580.	BITUMINOUS CONCRETE CURB - TYPE 3 at PER LINEAR FOOT				
697.1	4.	SILTATION SACK at EACH				
701.	20	CONCRETE SIDEWALK at PER SQUARE YARD				

SUBTOTAL PAGE 5

702.	65	BITUMINOUS CONCRETE WALK SURFACE at PER TON				
703.	15	BITUMINOUS CONCRETE DRIVEWAY at PER TON				
748.	1	MOBILIZATION at LUMP SUM				
751.	60	LOAM BORROW at PER CUBIC YARD				
765.	450	SEEDING at PER SQUARE YARD				
851.	1	SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS at LUMP SUM				
852.	80	SAFETY SIGNING FOR CONSTRUCTION OPERATIONS at PER SQUARE FOOT				
874.	2	STREET NAME SIGN at EACH				

SUBTOTAL PAGE 6

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999.1	1	POLICE SERVICES at ALLOWANCE	\$2,000	.00		
999.4	2	4" BRONZE SADDLE at EACH				

SUBTOTAL PAGE 7

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SUBTOTAL PAGE 7

SUBTOTAL PAGE 6

SUBTOTAL PAGE 5

SUBTOTAL PAGE 4

SUBTOTAL PAGE 3

SUBTOTAL PAGE 2

SUBTOTAL PAGE 1

GATES AVE TOTAL BASE BID PRICE

AWARD SHALL BE BASED ON BASE BID

SUPPLEMENTAL FORM FOR GENERAL BID

CITY OF MARLBOROUGH, MASSACHUSETTS

RECONSTRUCTION OF VARIOUS STREETS

AND APPURTENANT WORK

CONTRACT ED 2011-12

- WOOD ROAD -

Item No.	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
		Brought Forward				
120.1	350.	UNCLASSIFIED EXCAVATON at PER CUBIC YARD				
141.1	15.	TEST PIT FOR EXPLORATION at PER CUBIC YARD				
151.01	275.	GRAVEL BORROW TYPE C at PER CUBIC YARD				
151.22	20.	GRAVEL BORROW FOR SIDEWALKS at PER CUBIC YARD				
170.	3450.	FINE GRADING AND COMPACTING - SUBGRADE AREAS at PER SQUARE YARD				
170.1	725.	FINE GRADING AND COMPACTING - OTHER THAN SUBGRADE AREAS at PER SQUARE YARD				

SUBTOTAL PAGE 1

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220.5	5.	DRAINAGE STRUCTURE REMODELED at EACH				
220.8	2.	SANITARY STRUCTURE REMODELED at EACH				
265.06	730.	6 INCH PIPE SUBDRAIN-OPTION at PER LINEAR FOOT				
358.	4.	GATE BOX ADJUSTED at EACH				
403.	3450.	RECLAIMED BASE COURSE at PER SQUARE YARD				
420.	530.	CLASS I BITUMINOUS CONCRETE at PER TON				
440.	9000.	CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL at PER POUND				
460.	315.	CLASS I BITUMINOUS CONCRETE PAVEMENT TYPE I-1 at PER TON				

SUBTOTAL PAGE 2

464.	175.	BITUMEN FOR TACK COAT at PER GALLON				
482.2	300.	HOT POURED JOINT SEALER at PER LINEAR FOOT				
482.3	300.	SAWING BITUMINOUS CONCRETE at PER LINEAR FOOT				
570.3	1450.	BITUMINOUS CONCRETE CURB - TYPE 3 at PER LINEAR FOOT				
697.1	2.	SILTATION SACK at EACH				
702.	85.	BITUMINOUS CONCRETE WALK SURFACE at PER TON				
703.	15.	BITUMINOUS CONCRETE DRIVEWAY at PER TON				
715.	0.	RURAL MAILBOX REMOVED AND RESET at EACH				

SUBTOTAL PAGE 3

748.	1.	MOBILIZATION at LUMP SUM				
751.	120.	LOAM BORROW at PER CUBIC YARD				
765.	800.	SEEDING at PER SQUARE YARD				
851.	1.	SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS at LUMP SUM				
852.	112.	SAFETY SIGNING FOR CONSTRUCTION OPERATIONS at PER SQUARE FOOT				
874.501	3.	MISC. SIGNS REMOVED AND RESET at EACH				
999.1	1.	POLICE SERVICES at ALLOWANCE	\$2,000	.00		
999.5	4.	8" BRONZE SADDLE at EACH				

SUBTOTAL PAGE 4

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SUBTOTAL PAGE 4

SUBTOTAL PAGE 3

SUBTOTAL PAGE 2

SUBTOTAL PAGE 1

WOOD ROAD TOTAL BASE BID PRICE

AWARD SHALL BE BASED ON BASE BID

(BERKLEY STREET) TOTAL BASE BID

(EDINBORO STREET) TOTAL BASE BID

(GATES AVENUE) TOTAL BASE BID

(WOOD ROAD) TOTAL BASE BID

TOTAL BASE BID PRICE

CONTRACT NO. ED 2011-12

FORM FOR GENERAL BID

The undersigned hereby declare that they have carefully examined the Notice to Contractors, form of Contract and general conditions, specifications and plans referred to, and also the site upon which the proposed work is to be performed.

Accompanying this bid is a (bid bond) (certified check) (treasurer’s check) (cashier’s check) (cash) payable to the City of Marlborough, as the Awarding Authority, in the amount of _____ dollars (\$_____).

NO OTHER FORM OF BID SECURITY WILL BE ACCEPTED PER CHAPTER 149, SECTION 44B OF THE GENERAL LAWS.

The under signed also hereby certify under the penalties of perjury that they are the only persons interested in this bid; that it is made without any connection with any other person making any bid for the same work; that no person acting for, or employed by, the City of Marlborough is directly or indirectly interested in this bid, or in any contract which be made under it, or in expected profits to arise there from; and without directly or indirectly influencing or attempting to influence any other person or corporation to bid or to refrain from bidding or to influence the amount of the bid of any other person or corporation; and that this proposal is made in with distinct reference and relation to the plans and specifications prepared for this contract and herein mentioned. The undersigned further declare that in regard to the conditions affecting the work to be done and the labor and materials needed, this bid is based solely on their own investigation and research and not in reliance upon any representation of any employee, officer or agent of the City of Marlborough.

Please note that no part of the contractor’s work may be subcontracted without the previous written consent of the City of Marlborough. If you desire to subcontract any part of the work involving labor at the site, please promptly forward to the City of Marlborough al list in triplicate designating the work to be performed and the name of each proposed subcontractor for approval. Material suppliers not involving site labor need not be submitted for approval.

Name of Bidder: _____

Signature of Bidder: _____

The following information is furnished by the bidder for the information of the City of Marlborough as the Awarding Authority.

If a Corporation:

Incorporated in what State _____

President _____ Treasurer _____

Secretary _____

If a foreign corporation, are you registered to do business in Massachusetts.

Yes []

NO []

If selected for this work you are required under M.G.L. c30 §39L to obtain from the Secretary of State, Foreign Corporation Section, State House, Boston, MA, a certificate stating that your corporation is registered; and furnish said certificate to the City of Marlborough as the Awarding Authority prior to execution of a contract.

If a partnership: (Name of all partners)

Name of partner _____ Residence _____

Name of partner _____ Residence _____

If an Individual:

Name _____ Residence _____

If an Individual doing business under a firm name:

Name of firm _____

Business Address _____

Name of Individual _____ Residence _____

General Bids shall be for the complete work as specified, and shall include the names of sub-bidders and the amounts of their sub-bids; and the general contractor shall be selected on the basis of such general bids. Every general bid which is not accompanied by a bid deposit as prescribed by paragraph (2) of section forty-four B, or which otherwise does not conform with sections forty-four A to forty-four H, inclusive, or which is on a form not completely filled in, or which is incomplete, conditional or obscure, or which contains any addition not called for shall be invalid; and the City of Marlborough as the awarding authority shall reject every such bid. No such bid shall be rejected because of the failure to submit prices for, or information required to, any item or items for which no specific space is provided in the bid form furnished by the City of Marlborough, but this sentence shall not be applicable to any failure to furnish prices or information required by this section to be furnished in the above "Form of General Bid."

The bid price shall be the price set forth in paragraph C of the "Form for General Bid." No general bid shall be rejected (1) because the sum of the prices for all work of the general contractor and sub-bids does not equal the general bid price set forth on the bid form for that purpose or (2) because of error in setting forth the name, the sub-bid price of a sub-bidder, or the total sub-bids as long as the sub-bidder or sub-bidders designated are clearly identifiable, or (3) because the because the plans and specifications do not accompany the bid or are not submitted with the bid.

CONTRACT NO. ED 2011-12

**FORM FOR GENERAL BID
c. 30, §39M
BID SHEET**

To the Awarding Authority:

A. The undersigned proposes to furnish all labor and materials required for

_____ in
(project)

Marlborough, Massachusetts in accordance with the accompanying plans and

specifications prepared by _____
(name of architect or engineer)

for the contract price specified below, subject to additions and deductions according to the terms of the specifications.

B. This bid includes addenda numbered _____.

C. The Total Bid Price for Items **120.1 through 999.4** (base bid only) to complete the Reconstruction of Various Streets and Appurtenant Work, Marlborough, MA Contract ED 2011-12 as shown on the herein before referenced bid/contract documents is:

_____ Dollars and _____ Cents

(\$_____)

D. The subdivision of the proposed contract price is as follows (if applicable): **N/A**

Item 1. The work of the contractor, being all the work other than that covered by Item 2

\$_____

Item 2. (if applicable) as follows:

E. The undersigned agrees that, if he/she is selected as contractor, he/she will within five (5) days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the City of Marlborough as the Awarding Authority, execute a contract in accordance with the terms of this bid and furnish a performance bond and also a labor and materials or payment bond, each of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the City of Marlborough as the awarding authority and each in the sum of the contract price, the premiums for which are to be paid by the general contractor and are included in the contract price.

The undersigned hereby certifies that he/she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration (OSHA) that is at least ten (10) hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee (effective July 1, 2006); and that he/she will comply fully with all laws and regulations applicable to awards made subject to section forty-four A.

The undersigned further certifies under the penalty of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection, the word “person” shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the commonwealth under the provisions of section twenty-nine F (29F) of chapter twenty-nine (29), or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated there under.

Should the notice to Contractors, bid form, contract, plans or specifications require submission of special data to accompany the bid, the City of Marlborough as the Awarding Authority reserves the right to rule the bidder’s failure to submit such data as informality and to receive said data subsequently, within a reasonable time as set by the City of Marlborough.

If this bid is accepted by the City, the undersigned agrees to complete the entire work to be done under this contract within the time stipulated in the bid/contract documents.

The undersigned agrees that for extra work, if any performed in accordance with the bid/contract documents, he/she will accept compensation as stipulated therein in full payment for such extra work.

The Bidder understands that the City reserves the right to reject any and all bids.

The undersigned hereby agrees that they will not withdraw the bid within sixty (60) consecutive calendar days after the actual date of the opening of the Bids and that, if the Owner accepts this bid, the undersigned will acknowledge and duly execute the required Contract Bonds within five (5) calendar days after notification that the contract is ready for signature.

Should the undersigned fail to fulfill any of the stipulations as hereinbefore set forth, the City shall have the right to retain as liquidated damages the amount of the bid security, which shall become the City's property. If the bid bond was furnished as bid security, it is agreed that the amount thereof shall be paid as liquidated damages to the City by the Surety.

Date _____

(Name of General Bidder)

By _____
(Name of Person Signing Bid and Title)

(SEAL)

Federal Employees Identification Number (FID#)

(Business Address)

(City, State and Zip Code)

(Telephone Number)

CONTRACT NO. ED 2011-12

BIDDER INFORMATION SHEET

1. Kindly furnish the following information regarding the Bidder

A. IF A PROPRIETORSHIP:

Firm Name _____

Name of Owner _____

Business Address _____ Tel. _____

Home Address _____ Tel. _____

B. IF A PARTNERSHIP:

Full names and addresses of all partners

NAMES

ADDRESSES

Business Address _____ Tel. _____

C. IF A CORPORATION:

Full Legal Name _____

State of Incorporation _____

Principal Place of Business _____

Place of Business in Massachusetts _____ Tel. _____

2. Furnish the following information regarding the Surety Company:

Full Legal Name _____

State of Incorporation _____

Principal Place of Business _____

Admitted to do Business in Massachusetts: Yes [] No []

Name & Contact Number of local agent:

CONTRACT NO. ED 2011-12

STATEMENT OF BIDDER'S QUALIFICATIONS

(All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, add separate sheets for further details.)

1. Name of Bidder _____

2. Permanent Main Office Address _____

Street and No. _____

Owners or Town _____

State and Zip Code _____

3. When Organized: _____

4. When Incorporated: _____

5. How many years have you been engaged in the contracting business under your present firm name? _____

6. General character of work performed by your company:

7. Have you ever failed to compete any work awarded to you: Yes [] No []
If so, where and why:

8. Have you ever defaulted on a contract? Yes [] No []

9. Have the principal Owners of your company ever failed to complete a contract or been defaulted while engaged in a similar type of business under a different name or different business entity?

If so, attach a separate statement describing the situation in full.

10. Will you, if requested, furnish a detailed financial statement and any other such information to the Awarding Authority? Yes [] No []

CONTRACT NO. ED 2011-12

- 11. List the more important work completed by your company within the past ten years, stating the approximate cost for each and the month and year completed.

- 12. List your major equipment available for this contract:

- 13. List your experience in construction work similar in scope and importance to this project:

- 14. List your contracts on hand, showing gross amount of each contract and the approximate anticipated date of completion.

CONTRACT NO. ED 2011-12

15. The undersigned hereby authorizes any person, firm or corporation to furnish any information requested by the Awarding Authority in verification of the statements contained in this Statement of Bidder's Experience.

Dated at _____ this _____ day of _____, 2011.

(Name of Bidder)

By: _____
(Signature)

(Title)

SEAL

(Notary Public)

(My Commission Expires)

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we the undersigned

_____, as Principals, and
(insert name of bidder)

_____, As Surety, are hereby
(insert name of surety)

held and firmly bound unto the City of Marlborough, MA in the sum of \$_____ as liquidated damages for payment of which, well and truly to be made, we hereby jointly and severally bid ourselves, our heirs, executors, administrators, successors and assigns.

The condition of this obligation is such that whereas the Principal has submitted to the City of Marlborough, MA a certain Bid attached hereto and hereby made a part hereof, to enter into a contract in writing hereinafter referred to as the "AGREEMENT" and/or "Contract," for the Reconstruction of Various Streets and Appurtenant Work Contract ED 2011-12.

NOW THEREFORE,

- (a) If said bid shall be rejected or withdrawn as provided in the INFORMATION FOR BIDDERS attached hereto or, in the alternative,
- (b) If said bid shall be accepted and the Principal shall duly execute and deliver the form of AGREEMENT attached hereto and shall furnish the specified bonds for the faithful performance of the AGREEMENT and/or Contract and for the payments for labor and materials, furnished for the performance of the AGREEMENT and/or Contract,

then this obligating shall be void, otherwise it shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder in no event shall exceed the amount of this obligations.

The Surety, for value received, hereby agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extensions of the time within which said bid may be accepted, and said Surety does hereby waive notice of any such extensions.

IN WITNESS WHEREOF, the parties hereto have duly executed this bond on
the _____ day of _____, 2011

(SEAL)

(Name of Principal)

By: _____

(SEAL)

(Name of Surety)

By: _____

Sealed and delivered in the presence of

CONTRACT NO. ED 2011-12

NON COLLUSION AFFIDAVIT OF PRIME BIDDER

STATE OF _____

COUNTY OF _____

_____ being first duly sworn, deposes:

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

Subscribed and sworn to before me this

_____ Day of _____, 2011

Signed _____

Title _____

My Commission Expires: _____

NON COLLUSION AFFIDAVIT MUST BE SUBMITTED WITH BID

CONTRACT NO. ED 2011-12

CITY OF MARLBOROUGH
MARLBOROUGH, MASSACHUSETTS 01752-3812



**REQUIRED CERTIFICATIONS
(FOR SUBMISSION WITH CONTRACT DOCUMENTS)**

**CERTIFICATE OF COMPLIANCE WITH STATE TAX LAWS AND WITH UNEMPLOYMENT
COMPENSATION CONTRIBUTION REQUIREMENTS**

Pursuant to M.G.L. Chapter 62C, §49A and M.G.L. Chapter 151A, §19A, I,

authorized signatory for _____

whose principal place of business is at:

do hereby certify under penalties of perjury that the above business organization has filed all state tax returns, paid all taxes as required by law is in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholdings and remitting child support and has complied with all state laws pertaining to contributions to the unemployment compensation fund and to payments in lieu of contributions.

The Business Organization Social Security Number or Federal Identification Number is:

Signed under the penalties of perjury the _____ day of 2011.

Signature: _____

Name and Title: _____

If a corporation, complete below or attach to each signed copy of a contract a notarized copy of vote of corporation authorizing the signatory to sign this contract. If attesting clerk is same as individual executing contract, have signature notarized below.

At a duly authorized meeting of the Board of Directors of the

_____ held on _____
(Name of Corporation) (Date)

at which all the Directors were present or waived notice, it was VOTED That,

_____ (Name) _____ (Officer)

of this company be and hereby is authorized to execute contract and bonds in the name and behalf of said company, and affix its corporate seal thereto, and such execution of any contract or obligation in this company's name on its behalf by such

_____ of this company, shall be valid and binding upon
(Officer)
this company.

I hereby certify that I am the Clerk of the _____

that _____ is the duly elected

_____ of said company, and that the
(Officer)

above vote has not been amended or rescinded and remains in full force and effect as of the date of this contract.

a true copy,

ATTEST _____

Clerk

Place of Business _____

Corporate Seal

SWORN TO AND SUBSCRIBED BEFORE ME THIS _____ DAY OF

_____, 2011.

REQUIRED CERTIFICATIONS

CERTIFICATE OF VOTE

I, _____, Clerk of _____ hereby certify that, at a

meeting of the Board of Directors of said Corporation duly held on _____ which date is earlier than the contract to which this certificate is incorporated by reference, at which a quorum was present and voting throughout, the following vote was duly passed and is now in full force and effect:

"Voted: That _____ be and hereby is authorized, directed and

(Name of Officer authorized to sign for Corporation)

empowered for, in the name of and on behalf of this corporation, to sign, seal with the corporate seal, execute, acknowledge and deliver other obligations of this Corporation; the execution of any such contract, bond or obligation

by such (Name of Officer) _____ to be valid and binding upon this Corporation for all purposes, and that a certificate of the Clerk of this Corporation setting forth this vote shall be delivered to the Awarding Authority; and that this vote shall remain in full force and effect unless and until the same has been altered, amended or revoked by a subsequent vote of such directors and a certificate of such later vote attested by the Clerk of this Corporation is delivered to the Awarding Authority."

I, further certify that (NAME OF OFFICER) _____

is the duly-elected (TITLE) _____ of said corporation.

► **Signed:** _____
CLERK-SECRETARY

Place of Business: _____

Date of Contract: _____

AFFIX CORPORATE SEAL

► **Countersignature:** _____
(Name and Title of Officer)

In the event that the Clerk or Secretary is the same person as the Officer authorized to sign that contract or other instrument for the Corporation, this Certificate must be counter signed by another officer of the Corporation.

Contract Forms



**PROCUREMENT OFFICE
CITY HALL, FOURTH FLOOR**
TEL. 508/460-3707 FAX: 508/624-6504 TDD 508/460-3610

**Form of Contractual Agreement
For Projects Subject to M.G.L. c. 30, §39M**

CONTRACT

**BETWEEN the Owner: City of Marlborough
140 Main Street
Marlborough, MA 01752-3812**

And the Contractor:

The Project is: Reconstruction of Various Streets and Appurtenant Work

**The Designer is: The City of Marlborough
Department of Public Works – Engineering Division**

City Clerk Contractor Legal /CPO Department Auditor



Account#
Amount: \$

Contract #ED2011-12
Purchase Order #

**PUBLIC WORKS CONSTRUCTION CONTRACT
CHAPTER 30, SECTION 39M**

THIS AGREEMENT made on this _____ day of _____, 2011
Between _____ a corporation, partnership, individual organized under the laws of Massachusetts and having a usual place of business at _____ (hereinafter called the "Contractor"), and the City of Marlborough as the awarding authority, a municipal corporation within said County of Middlesex and having a usual place of business at 140 Main Street, Marlborough, MA 01752, (hereinafter called the "City") as represented by the MAYOR acting for and in behalf of the City of Marlborough who signs these presents in his/her official capacity, and incurs no liability in his/her individual capacity.

The authorized agent for the City of Marlborough as the Awarding Authority under this contract is the MAYOR.

WITNESSETH:

That the parties to this agreement, each in consideration of the agreements on the part of the other herein contained, do hereby agree, the City of Marlborough for itself, and said (_____) for (_____) and heirs, executors, administrators, successors assigns, as follows:

DESCRIPTION OF WORK

1.1 The Contractor shall, pursuant to this AGREEMENT, provide all the supplies, materials, and equipment, and perform all the labor, services and supervision necessary and proper for the Reconstruction of Various Streets and Appurtenant Work (hereinafter called the "Project") in the City of Marlborough, Massachusetts, and to accomplish any and all work incidental thereto in accordance with the plans and specifications dated June 15, 2011.

BONDS (MGL c. 149 §29, c. 30, §39A & c. 30, §40)

2.1 The Contractor shall obtain and deposit with the City the following bond(s) from qualified sureties licensed to do business in the Commonwealth of Massachusetts in the amount of:

PERFORMANCE _____ BOND:

PAYMENT _____ BOND:

with sureties satisfactory to the Contracting Officer to (a) guarantee the faithful performance by the Contractor of all its obligations under this AGREEMENT and (b) constitute the security required by Massachusetts General Laws Chapter 149, Section 29, and Chapter 30, Section 39A, as amended, for the payment by the Contractor, and its subcontractors, if any, for all labor performed or furnished and for all materials used or employed in connection with this AGREEMENT.

2.2 Bonds given to the City to secure performance of contracts for the construction, repair of public buildings or other public works may be discharged or released by the awarding authority, upon such terms as it deems expedient, after the expiration of one year from the time of completion, subject to section 39K of c. 30, of the work contracted to be done; provided that no claim filed under said bond is pending, and provided further, that no such bonds shall be discharged or released prior to the expiration of all special guarantees provided for in the contract unless new bonds in substitution therefore specifically relating to the unexpired guarantees shall be taken pursuant to M.G.L. c. 30, §40, as amended.

CONTRACTING OFFICERS (MGL c. 43, §29 & c. 44, §31C)

3.1 Wherever used in this AGREEMENT, the term “Contracting Officers” shall mean the City Officials so designated below, or the individual duly appointed by him/her for the performance of any of his/her functions or responsibilities under this AGREEMENT. The work performed hereunder shall be carried out under the direction and subject to the approval and acceptance of (hereinafter called the Contracting Officers);

Mayor
Department Head
City Auditor

INCORPORATED DOCUMENTS

4.1 The performance of this AGREEMENT is subject to the provisions of the following documents, all of which are attached hereto and intended to be an integral part of this AGREEMENT (hereinafter collectively referred to as “the Contract Documents”);

- a. Information to Bidders
- b. Bid Proposal
- c. Specifications, Drawings and Addenda
- d. General Conditions
- e. Special Conditions
- f. Supplementary Conditions, if any

4.2 The Contract Documents are to be read collectively and complementary to one another; any requirement under one shall be as binding as if required by all. In the event of any conflict or inconsistency between the provisions of this AGREEMENT and any of the other Contract Documents, the provisions of this AGREEMENT shall prevail. In the event of any conflict or inconsistency between this AGREEMENT, the Contract Documents and any applicable state law, the applicable statutory provisions shall prevail.

TIME FOR PERFORMANCE

5.1 Time is of the essence for this AGREEMENT. The work of this AGREEMENT must be substantially completed **60 calendar days** following receipt by the Contractor of a Notice to Proceed from the City.

5.2 **Liquidated damages**, but not as penalty, will be assessed at a rate of Five Hundred (\$500.00) Dollars per calendar day beyond the date indicated in the event of a breach of contract.

PRICE:

6.1 The City will pay the Contractor for all materials delivered or furnished and for all the work performed pursuant to Article (1) hereof a sum of money as follows:

UNIT PRICE: The unit prices are referenced in the FORM OF GENERAL BID, G: ESTIMATE

For Alternate No. _____, add \$ N/A; subtract \$ _____ **(repeat as applicable)**

PAYMENT (M.G.L. c. 30, §39F & §39G)

7.1 Payment shall be made by the City in accordance with General Laws Chapter 30, Section 39F, as amended, as follows:

(a) Forthwith after the general contractor receives payment on account of a periodic estimate, the general contractor shall pay to each subcontractor the amount paid for the labor performed and the materials furnished by that subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(b) Not later than the sixty-fifth day after each subcontractor substantially completes his work in accordance with the plans and specifications, the entire balance due under the subcontract less amounts retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the subcontractor; and the awarding authority shall pay that amount to the general contractor. The general contractor shall forthwith pay to the subcontractor the full amount received from the awarding authority less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(c) Each payment made by the awarding authority to the general contractor pursuant to subparagraphs (a) and (b) of this paragraph for the labor performed and the materials furnished by a subcontractor shall be made to the general contractor for the account of that subcontractor; and the awarding authority shall take reasonable steps to compel the general contractor to make each such payment to each such subcontractor. If the awarding authority has received a demand for direct payment from a subcontractor for any amount which has already been included in a payment to the general contractor or which is to be included in a payment to the general contractor for payment to the subcontractor as provided in subparagraphs (a) and (b), the awarding authority shall act upon the demand as provided in this section.

(d) If, within seventy days after the subcontractor has substantially completed the subcontract work, the subcontractor has not received from the general contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, the subcontractor may demand direct payment of that balance from the awarding authority. The demand shall be by a sworn statement delivered to or sent by certified mail to the awarding authority, and a copy shall be delivered to or sent by certified mail to the general contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth day after the subcontractor has substantially completed the subcontract work. Within ten days after the subcontractor has delivered or so mailed the demand to the awarding authority and delivered or so mailed a copy to the general contractor, the general contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the awarding authority and a copy shall be delivered to or sent by certified mail to the subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor and of the amount due for each claim made by the general contractor against the subcontractor.

(e) Within fifteen days after receipt of the demand by the awarding authority, but in no event prior to the seventieth day after substantial completion of the subcontract work, the awarding authority shall make direct payment to the subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount (i) retained by the awarding authority as the estimated cost of completing the incomplete or unsatisfactory items of work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the general contractor in the sworn reply; provided, that the awarding authority shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by subparagraph (d). The awarding authority shall make further direct payments to the subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this subparagraph.

(f) The awarding authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of subparagraph (e) in an interest-bearing joint account in the names of the general contractor and the subcontractor in a bank in Massachusetts selected by the awarding authority or agreed upon by the general contractor and the subcontractor and shall notify the general contractor and the subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided

in an agreement between the general contractor and the subcontractor or as determined by decree of a court of competent jurisdiction.

(g) All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to subparagraph (f) shall be made out of amounts payable to the general contractor at the time of receipt of a demand for direct payment from a subcontractor and out of amounts which later become payable to the general contractor and in the order of receipt of such demands from subcontractors. All direct payments shall discharge the obligation of the awarding authority to the general contractor to the extent of such payment.

(h) The awarding authority shall deduct from payments to a general contractor amounts which, together with the deposits in interest-bearing accounts pursuant to subparagraph (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from subcontractors. All such amounts shall be earmarked for such direct payments, and the subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the general contractor.

No payment will be made for any extra charges such as shipping or delivery.

7.2 Payment shall be made by the City in accordance with General Laws Chapter 30, Section 39G, as amended, as follows:

Upon substantial completion of the work required by a contract with the commonwealth, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair or improvement of public ways, including bridges and other highway structures, sewers and, water mains, airports and other public works, the contractor shall present in writing to the awarding authority its certification that the work has been substantially completed. Within twenty-one days thereafter, the awarding authority shall present to the contractor either a written declaration that the work has been substantially completed or an itemized list of incomplete or unsatisfactory work items required by the contract sufficient to demonstrate that the work has not been substantially completed. The awarding authority may include with such list a notice setting forth a reasonable time, which shall not in any event be prior to the contract completion date, within which the contractor must achieve substantial completion of the work. In the event that the awarding authority fails to respond, by presentation of a written declaration or itemized list as aforesaid, to the contractor's certification within the twenty-one day period, the contractor's certification shall take effect as the awarding authority's declaration that the work has been substantially completed.

Within sixty-five days after the effective date of a declaration of a substantial completion, the awarding authority shall prepare and forthwith send to the contractor for acceptance a substantial completion estimate for the quantity and price of the work done and all but one per cent retainage on that work, including the quantity, price and all but one per cent retainage for the undisputed part of each work item and extra work item in dispute but excluding the disputed part thereof, less the estimated cost of completing all incomplete and unsatisfactory work items and less the total periodic payments made to date for the work. The awarding authority also shall deduct from the substantial completion estimate an amount equal to the sum of all demands for direct payment filed by subcontractors and not yet paid to subcontractors or deposited in joint accounts pursuant to section thirty-nine F, but no contract subject to said section thirty-nine F shall contain any other provision authorizing the awarding authority to deduct any amount by virtue of claims asserted against the contract by subcontractors, material suppliers or others.

If the awarding authority fails to prepare and send to the contractor any substantial completion estimate required by this section on or before the date herein above set forth, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such substantial completion estimate at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston from such date to the date on which the awarding authority sends that substantial completion estimate to the contractor for acceptance or to the date of payment therefore, whichever occurs first. The awarding authority shall include the amount of such interest in the substantial completion estimate.

Within fifteen days after the effective date of the declaration of substantial completion, the awarding authority shall send to the contractor by certified mail, return receipt requested, a complete list of all incomplete or unsatisfactory work items, and, unless delayed by causes beyond his control, the contractor shall complete all such work items within forty-five days after the receipt of such list or before the then contract completion date, whichever is later. If the contractor fails to complete such work within such time, the awarding authority may, subsequent to seven days' written notice to the contractor by certified mail, return receipt requested, terminate the contract and complete the incomplete or unsatisfactory work items and charge the cost of same to the contractor.

Within thirty days after receipt by the awarding authority of a notice from the contractor stating that all of the work required by the contract has been completed, the awarding authority shall prepare and forthwith send to the contractor for acceptance a final estimate for the quantity and price of the work done and all retainage on that work less all payments made to date, unless the awarding authority's inspection shows that work items required by the contract remain incomplete or unsatisfactory, or that documentation required by the contract has not been completed. If the awarding authority fails to prepare and send to the contractor the final estimate within thirty days after receipt of notice of completion, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such final estimate at the rate hereinabove provided from the thirtieth day after such completion until the date on which the awarding authority sends the final estimate to the contractor for acceptance or the date of payment therefor, whichever occurs first, provided that the awarding authority's inspection shows that no work items required by the contract remain incomplete or unsatisfactory. Interest shall not be paid hereunder on amounts for which interest is required to be paid in connection with the substantial completion estimate as hereinabove provided. The awarding authority (City) shall include the amount of the interest required to be paid hereunder in the final estimate.

The awarding authority (City) shall pay the amount due pursuant to any substantial completion or final estimate within thirty-five days after receipt of written acceptance for such estimate from the contractor and shall pay interest on the amount due pursuant to such estimate at the rate hereinabove provided from that thirty-fifth day to the date of payment. Within 15 days, 30 days in the case of the commonwealth, after receipt from the contractor, at the place designated by the awarding authority, if such place is so designated, of a periodic estimate requesting payment of the amount due for the preceding periodic estimate period, the awarding authority shall make a periodic payment to the contractor for the work performed during the preceding periodic estimate period and for the materials not incorporated in the work but delivered and suitably stored at the site, or at some location agreed upon in writing, to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that the materials are free from all encumbrances. The awarding authority shall include with each

such payment interest on the amount due pursuant to such periodic estimate at the rate herein above provided from the due date. In the case of periodic payments, the contracting authority may deduct from its payment a retention based on its estimate of the fair value of its claims against the contractor, a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and a retention to secure satisfactory performance of the contractual work not exceeding five per cent of the approved amount of any periodic payment, and the same right to retention shall apply to bonded subcontractors entitled to direct payment under section thirty-nine F of chapter thirty; provided, that a five per cent value of all items that are planted in the ground shall be deducted from the periodic payments until final acceptance.

No periodic, substantial completion or final estimate or acceptance or payment thereof shall bar a contractor from reserving all rights to dispute the quantity and amount of, or the failure of the awarding authority to approve a quantity and amount of, all or part of any work item or extra work item.

Substantial completion, for the purposes of this section, shall mean either that the work required by the contract has been completed except for work having a contract price of less than one per cent of the then adjusted total contract price, or substantially all of the work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the work required by the contract.

7.3 In addition to the retainage provided for in the above statutory provisions, the City may also, with the written consent of the Contractor, use any of the sums payable under this contract to pay for labor, materials, and for the rental of equipment that has been furnished to the Contractor or any of its subcontractors in connection with work under this contract, regardless of whether claims for such obligations have been filed with the City under General Laws Chapter 149, Section 29 or Chapter 30, Section 39A.

7.4 The payment shall be in full for furnishing all materials, supplies, labor services, supervision, tools and equipment and the use thereof as embraced under the AGREEMENT and shall also constitute the payment for all loss or damage to the Contractor arising out of the nature of the work or from the action of the elements or from any unforeseen difficulties or obstructions which may arise or be encountered during the prosecution of the work until its final approval by the Contracting Officers, and for all risks to the Contractor of every description connected with the prosecution of the work or infringement of patents, trademarks, or copyrights and for completing the work in an acceptable manner.

7.5 The payment of any periodic estimate or of any retained percentage shall in no way constitute and acceptance of the work or in no way prejudice or affect the obligation of the Contractor at his own cost or expense to repair, correct, renew, or replace any defects or imperfections in the construction as well as all damages due or attributable to such defects, nor shall any such payment for any current estimate or of any retained percentage prejudice or affect the rights of the City to hold the Contractor liable for breach of contract or to avail itself of the remedies under Article 13, hereof.

7.6 If at any time there shall be evidence of any lien or other claim for which, if established, the City may become liable, directly or indirectly, and which is chargeable to the Contractor, the City may retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify it against any such claim. If there prove to be any such claims after all the payments are made, the Contractor shall refund to the City all moneys that the City pays in discharging such claim in consequence of the Contractor's default.

7.7 The Contractor, and each subcontractor, if any, at every tier, represents, warrants and certifies that it has complied with all laws of the Commonwealth of Massachusetts relating to taxes and all Ordinances and Orders of the City of Marlborough relating to taxes, fees and charges, or is lawfully contesting the validity of the same. The Contractor, and each subcontractor, if any, at every tier, further represents, warrants and certifies that it will remain in such compliance during the term of this AGREEMENT, including any amendments or extensions hereto. Breach of any of these provisions shall be deemed a material breach which shall entitle the City to immediately terminate this AGREEMENT and take any other action authorized by law to collect any amounts due the City.

PAYMENTS OF SUBCONTRACTORS

8.1 Payment to subcontractors shall be made in accordance with General Laws Chapter 30, Section 39F, as amended, as noted in section 7.

NOTICE

9.1 Wherever in this AGREEMENT the City is to give or receive a notice, **Thomas E. Cullen, Jr., City Engineer, 135 Neil Street, Marlborough, MA 01752** shall be the City's agent for such purpose.

9.2 Wherever in this AGREEMENT the Contractor is to give or receive a notice, _____ shall be the Contractor's agent for such purpose.

PERFORMANCE

10.1 The Contractor shall give his/her personal attention constantly to the faithful prosecution of the work and shall keep the same under his/her personal control. He/She shall not assign by power of attorney or otherwise the work or any part thereof without the previous written consent of the Contracting Officers. He/She shall not either legally or equitably assign any of the moneys payable under this contract or any claim thereto unless by and with like consent on the part of the Contracting Officers and the City Treasurer. He/She shall be responsible for all the acts and omissions of his/her employees and of all persons directly or indirectly employed by him/her in connection with the prosecution of this work.

10.2 The Contractor shall provide sufficient and proper facilities at all times for the inspection of the work by the City. He/She shall, after receiving written notice that certain work or construction is improper, unsafe or defective or that such construction in any way fails to conform to the contract documents, forthwith remove such unsafe or defective construction and reconstruct the same in a manner satisfactory to the Contracting Officers. Upon failure of the Contractor to remedy the construction after beings so notified, the City Engineer may cause such defective work to be remedied or replaced and the City may deduct the cost thereof from any moneys due or to become due the Contractor.

10.3 The City, acting through the City Engineer, shall have the authority to suspend the work wholly, or in part thereof, for such period as he/she shall deem necessary, due to failure of the Contractor to carry out orders given or to perform any provision of the contract. Upon receipt of written order from the City Engineer, the Contractor shall immediately suspend the work or such part thereof in accordance with the order. No work shall be suspended without the written permission of the City's authorized representative. The work shall be resumed when conditions

so warrant, or deficiencies have been corrected and the condition of the contract satisfied as ordered or approved in writing by the City Engineer. No allowance of any kind will be made for suspension of work by order of the City Engineer pursuant to this paragraph.

10.4 If, during the process of the work, the Contractor or the City discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the contract documents either the Contractor or the City may request an equitable adjustment in the price of the AGREEMENT applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from the Contractor, or upon its own initiative, the City shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost of performance of the work or a change in the construction methods required for the performance of the work which results in an increase or decrease in the cost of the work, the Contracting Authority shall make an equitable adjustment in the contract price and the AGREEMENT shall be modified in writing accordingly, as required by M.G.L. c. 30, §39N, as amended.

10.5 The Contractor agrees that it will have no claim for damages of any kind on account of any delay in commencement of the Work, or any delay or suspension of any portion thereof, except as hereinafter provided. Post commencement, the Contractor shall have no claim for damages of any kind on account of any delay or suspension of any portion of the work except as hereinafter provided. Adjustments, if any, in the contract price due to a suspension, delay, interruption or failure to act by the City shall be governed by the provisions of M.G.L. c. 30, §39(O), as amended. Provided, however, the provisions of this paragraph shall not apply to any suspension pursuant to paragraph 10.3, or for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this AGREEMENT provides for an equitable adjustment of the contract price, or time under any other AGREEMENT provision. Provided further, that no adjustment shall be made if the performance of the Contractor would have been prevented by other causes, even if the work had not been so suspended, delayed or interrupted by the City. Provided further, that a subcontractor shall have the same rights against the Contractor for payment for an increase in the cost of his/her performance as the provisions of this paragraph gives the Contractor against the City, but nothing herein shall in any way change, modify or alter any other rights which the General Contractor and subcontractor may have against each other.

(a) The awarding authority (City), may order the general contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the awarding authority; provided however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the awarding authority to act within the time specified in this contract, the awarding authority (City) shall make an adjustment in the contract price for any increase in the cost of performance of this contract but shall not include any profit to the general contractor on such increase; and provided further, that the awarding authority shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this contract provides for an equitable adjustment of the contract price under any other contract provisions.

(b) The Contractor must submit the amount of a claim under provision 10.5 to the awarding authority (City) in writing as soon as practicable after the end of the suspension, delay or interruption or failure to act and, in any event, not later than the date of final payment under this AGREEMENT and, except for costs due to a suspension order, the City shall not approve any costs in the claim incurred more than twenty days before the General Contractor notified the City in writing of the act or failure to act involved in the claim.

10.6 The awarding authority (City) may award other contracts for additional work. The Contractor shall cooperate fully with other contractors and carefully fit his/her own work to that of other contracts as may be directed by the Contracting Officers. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor.

10.7 The Contractor shall comply with all the laws, state and federal, applicable to the work and construction herein provided for. This AGREEMENT is made subject to all laws, state and federal; and if any clause hereof does not conform to such law, then such clause shall be void and the operative state or federal law shall be inserted in lieu thereof. Any violation by the Contractor of state or federal laws relating to the employment of labor upon the work or the construction contemplated by this AGREEMENT shall be a sufficient cause for the City to cancel the AGREEMENT without in any way being liable in damages therefore. Should the City cancel the AGREEMENT because of the failure on the part of the Contractor to observe the state or federal laws, or the rules and regulations relating to employment and labor upon the work herein contemplated, then upon cancellation the City reserves all rights and benefits herein or by law provided against the Contractor for the breach of the conditions of this AGREEMENT.

10.8 When the use of explosives is necessary for the prosecution of the work, the Contractor shall take the utmost care not to endanger life and property. Whenever directed, the number and size of the charges shall be reduced. All explosives shall be stored in a secure manner. All such storage places shall be marked clearly "DANGEROUS – EXPLOSIVES", and shall be in the care of competent watchmen at all times. The method of storage and handling explosives and highly inflammable materials shall conform to all the State laws and regulations, as well as any local requirements.

10.9 Upon the completion of the work, the Contractor shall at his/her own expense remove all equipment, temporary Contractor's buildings and sheds, fencing, rubbish and waste material in and about the area that has been worked and he/she shall leave the premises and the work performed all in a neat and proper condition.

10.10 Before commencing the work, the Contractor shall, if required, submit a schedule of operations for approval by the City's agent. The schedule shall show the methods and order of operations that the Contractor proposes to use. The approval of the schedule by the City's agent shall not be constructed as relieving the Contractor from any responsibility.

10.11 Should the Contractor be obstructed or delayed in the prosecution of the work by any act or neglect on the part of the City, or as a result of damage which may be caused by lightning, earthquake, rain, storm, or cyclone, then the time fixed for completion may be extended for a period equivalent to the time lost by reason of any of the foregoing causes. No such extension shall be made unless a claim therefore is presented in writing to the City's agent within forty-eight hours of the occurrence of such delay. The Contractor shall have no claim against the City for damages on account of such delay. The duration of the extension must be certified in writing by the City's agent as stated in Article 9.

CHANGE ORDERS/DEVIATIONS FROM PLANS & SPECIFICATIONS/ADJUSTMENTS FOR ADDITIONAL WORK (M.G.L. c. 44 §31C & M.G.L. c. 30, §39I)

11.1 The Contractor agrees to perform any work related to the subject matter of the AGREEMENT, but not within the scope of the AGREEMENT and specifications, upon the written order of the Contracting Officers, the payment for such extra work to be made in accordance with one of the methods set forth in Section 10 of the General Conditions of the Contract for Construction.

11.2 The City's agent may make alterations in the line, grade, plan, form, dimensions, or materials of the subject matter of the contract, or any part thereof either before or after commencement of construction. Where such alterations increase the quantity or standard of the work to be done, payment for such increase shall be made in the same way that payment is made for such extra work under (a), above. Where such alterations diminish the quantity or standard of the work to be done, an adjustment shall be made to the benefit of the City based upon the unit prices where used, or where unit prices are not used, as the City's agent shall determine.

11.3 The Contractor shall perform all the work required by such contract in conformity with the plans and specifications contained therein. No willful and substantial deviation from said plans and specifications shall be made unless authorized in writing by the Contracting Officers or by the engineer or architect in charge of the work who is duly authorized by the City to approve such deviations.

In order to avoid delays in the prosecution of the work required by such contract such deviation from the plans or specifications may be authorized by a written order of the awarding authority (City) or such engineer or architect so authorized to approve such deviation. Within thirty days thereafter, such written order shall be confirmed by a certificate of the awarding authority stating:

- (1) If such deviation involves any substitution or elimination of materials, fixtures or equipment, the reasons why such materials, fixtures or equipment were included in the first instance and the reasons for substitution or elimination, and, if the deviation is of any other nature, the reasons for such deviation, giving justification therefore;
- (2) that the specified deviation does not materially injure the project as a whole;
- (3) that either the work substituted for the work specified is of the same cost and quality, or that an equitable adjustment has been agreed upon between the contracting agency and the contractor and the amount in dollars of said adjustment; and
- (4) that the deviation is in the best interest of the contracting authority. Such certificate shall be signed under the penalties of perjury and shall be a permanent part of the file record of the work contracted for as required by M.G.L. c. 30, §39I, as amended.

11.4 The City is not obligated to pay for change orders that are not approved in writing as required by M.G.L. c. 44, §31C and M.G.L. c. 30, §39I, as amended.

INTERPRETATIONS AND APPROVALS (M.G.L. C. 30, §39P)

12.1 If the awarding authority (City), any official, its architect or engineer is required to make a decision on interpretation of the specifications, approval of equipment, material or any other approval, or progress of work, the decision shall be made promptly and, in any event, no later than thirty (30) days after the written submission for decision; but if such decision requires extended investigation and study, the awarding authority (City), the official, architect or engineer shall, within, thirty days (30) after receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty day (30) period and the date by which the decision will be made as required by M.G.L. c. 30, §39P, as amended.

EMPLOYMENT (M.G.L. c. 149, §§26-37)

13.1 The Contractor shall employ competent workers, and if notified by the City's agent in writing that any person engaged upon the work is incompetent, unfaithful, disorderly or otherwise unsatisfactory, then such worker shall be discharged from the work.

13.2 In the employment of persons, including mechanics, teamsters, chauffeurs and laborers, under this contract, preference shall be given as required by G.L. c. 149, §§26-28.

13.3 In the employment of persons and subcontractors, bonds for payment for labor, materials, rentals or transportation charges, the Contractor shall obtain security by bond as required by M.G.L. c. 149, §29, as amended. The City requires the bond be in the amount of one hundred percent (100%) the total contract price.

13.4 No laborer, worker, mechanic, foreman, or inspector working within the Commonwealth of Massachusetts in the employ of the Contractor, subcontractors, or other person doing or contracting to do the whole or part of the work contemplated by this AGREEMENT, shall be required or permitted to work more than eight hours in any one calendar day; or more than 48 hours in one week, or more than 6 days in any one week in full compliance with provisions of M.G.L. c. 149, §34, as amended, except in cases of emergency.

13.5 Every employee in the work covered by this AGREEMENT shall lodge, board and trade where and with whom he elects and neither the Contractor nor his agents or employees shall directly or indirectly require as a condition of employment therein that an employee shall lodge, board or trade at a particular place or with a particular person.

13.6 The City shall report to the state secretary and to the Department of Revenue any foreign corporation performing work under such contract or subcontract, and any person, other than a corporation, performing work under such contract or subcontract, and residing or having a principal place of business outside the commonwealth as required by M.G.L. c. 30, §39L, as amended.

13.7 The Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of the employees as may be necessary to comply with the requirements of the Department of Public Health, local health officials or other appropriate authorities. The maintenance of all sanitary facilities shall be subject to the laws of the Commonwealth and to the rules and regulations of the State Board of Health and the Board of Health for the City of Marlborough.

13.8 The Contractor shall, before commencing the work, provide by insurance for the payment of compensation and the furnishing of other benefits under Chapter 152 of the General Laws to all persons employed under the AGREEMENT, and he/she shall continue such insurance in force and effect during the term thereof. The City may require the Contractor to deliver certificates of insurance as sufficient proof of compliance with the foregoing. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the AGREEMENT and shall entitle the City to terminate the AGREEMENT without in any way being liable in damages therefore.

13.9 The Contractor shall keep a true and accurate register of all mechanics, teamsters, chauffeurs and laborers employed upon the work contemplated by this AGREEMENT, showing the name, address and occupational classification of each such employee, the hours worked by and the wages paid to each such employee, and shall furnish the Massachusetts Attorney General's Office, or such other appropriate state official upon request a true statement thereof.

13.10 Minimum prevailing wage rates under the provision of General Laws c. 149, §27, as amended, have been determined by the state Department of Labor, Division of Occupational Safety, and the Contractor shall in the payment of wages be bound by them during the life of the AGREEMENT. The applicable schedule of minimum prevailing wage rates, as so determined, is incorporated elsewhere within the Contract Documents.

13.11 The Contractor shall furnish documentation for all employees to be employed at the worksite that they have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and shall furnish said documentation of successful completion of said course with the first certified payroll report for each employee as required by M.G.L. c. 30, §39S, as amended.

TERMINATION

14.1 If the Contractor shall be adjudged a bankrupt, or if he/she shall make a general assignment for the benefit of his/her creation, or if a receiver of his/her property shall be appointed, or if the work to be done under the AGREEMENT shall be abandoned, or if the AGREEMENT or any part thereof shall be sublet without the previous written consent of the Contracting Officers, or if the AGREEMENT or any claim thereunder shall be assigned by the Contractor otherwise than as herein specified, or if at any time the City's agent shall be of the opinion that the work, or any part thereof, is unnecessarily or unreasonably delayed, or that the City's agent, for and in behalf of the City, may notify the Contractor to discontinue all work, or any part thereof, and thereupon the Contractor shall discontinue such work or such part thereof as the City's agent may designate, remove his/her equipment, tools, supplies and materials as the City's agent directs, and the City may thereupon, by contract or otherwise, as it may determine, complete the work, or such part thereof, and charge the entire expense of so completing the work or any part thereof to the Contractor.

14.2 If the City's agent shall certify by written notice to the Contractor that the rate of progress is not satisfactory, the City may, instead of notifying the Contractor to discontinue all of the work or any part thereof, notify him from time to time to increase the force, equipment and plant, or any of them, employed on the whole or any part of the work, stating the amount of increase required. Unless the Contractor shall, within five days after such notice, increase his/her force, equipment and plant to the extent required therein, and maintain and employ the same from day to day until the completion of the work or such part thereof, or until the conditions of the work or

such part thereof, or until the conditions as to the rate of progress shall, in the opinion of the City's agent, be fulfilled, the City may employ and direct the labors of such additional force, equipment and plant as may, in the opinion of the City's agent, be necessary to insure the completion of the work or such part thereof within the time specified or at the earliest possible date thereafter, and charge the expense thereof to the Contractor. Neither the notice from the City's agent to the Contractor to increase his/her force, equipment or plant nor the employment of additional force, equipment or plant by the City shall be held to prevent a subsequent notice to the Contractor from the City to discontinue the work under the provisions of the preceding portion of this Article.

14.3 All expenses charged under this Article shall be deducted by the City out of moneys then due or to become due the Contractor under this AGREEMENT, or any part thereof. In such accounting, the City shall not be obligated to obtain the lowest figures for the work of completing the AGREEMENT or any part thereof, or for insuring its proper completion, and all sums actually paid by the City shall be charged to the Contractor. If the expense so charged is greater than the sum which would have been payable under the AGREEMENT, if the same had been completed by the Contractor, then the Contractor shall pay the amount of the excess to the City upon completion of the work and without further demand being made therefore.

14.4 The Contractor shall not be relieved of liability to the City by virtue of any termination of this AGREEMENT and any claim for damages against the Contractor relating to the Contractor's performance under this AGREEMENT shall survive any termination hereunder.

GUARANTEES

15.1 The Contractor guarantees the work under this AGREEMENT and the materials furnished by him/her for use in connection therewith to be free from defects or flaws for one year after the completion of the AGREEMENT. It is expressly understood, however, that this guarantee provision shall not absolve the Contractor from any liability to the City arising out of a failure to substantially comply with the terms of the AGREEMENT.

15.2 If at any time within said guaranty period, any part of the work constructed under the terms of this AGREEMENT shall in the opinion of the City's agent require repairing due to defective work or materials furnished by the Contractor he/she may notify the Contractor in writing to make the required repairs. If the Contractor shall neglect to start such repairs within ten days of the date of giving him/her notice thereof and to complete the same to the satisfaction of the City's agent with reasonable dispatch, then the latter may employ other persons to make such repairs. The City shall charge the expense thereof to the Contractor and may use any moneys retained to pay for the same, and if such sum is insufficient, the Contractor shall be obligated to pay the balance thereof.

15.3 The Contractor shall submit in duplicate after completion of the contract work and prior to final payment approved by the City, a completed General Contractor's Guarantee Form incorporated elsewhere within the Contract Documents.

INDEMNIFICATION AND RELATED PROVISIONS

16.1 The Contractor shall, to the maximum extent permitted by law, indemnify and save harmless the City of Marlborough and all of its officers, agents and employees from and against any and all damages, liabilities, actions, suits, proceedings, claims, demands, losses, or liability of every name, nature, and description, costs and expenses (including reasonable attorneys'

fees) that may arise out of or in connection with the work being performed or to be performed by the Contractor, its employees, agents, subcontractors or material men or in consequence of the acts or omissions of this AGREEMENT in the performance of the work covered by the contract and/or his/her failure to comply with the terms and conditions hereof; and will at his own cost and expense defend any and all such suits and actions. The existence of insurance shall in no way limit the scope of this indemnification.

The Contractor further agrees to reimburse the City of Marlborough for damage to its property caused by the Contractor, its employees, agents, subcontractors or material men, including damages caused by his, its or their use of faulty, defective or unsuitable material or equipment, unless the damage is caused by the City of Marlborough's gross negligence or willful misconduct.

16.2 The Contractor shall bear all losses resulting from the use or storage of explosives and highly inflammable materials and shall save the City harmless from all claims for bodily injuries or death to any person and from all claims for property damage or destruction arising out of the use or storage of explosives and highly inflammable materials.

16.3 The Contractor further covenants to hold and save the City, its officers, servants and employees harmless from and against all and every demand or demands, of any nature or kind for or on account of the use of any patented invention, article or appliance included in the materials and equipment agreed to be furnished, supplied or used under this AGREEMENT.

16.4 The Contractor shall indemnify and hold harmless the City for any non payment of wages required by M.G.L. c. 149, §§26-27D, as amended.

INSURANCE

17.1 The Contractor shall carry public liability insurance so as to save the City harmless from any and all claims for damages arising out of bodily injury to, or death of, any person or persons and for all claims for damages arising out of injury to or destruction of property caused by accidents resulting from the use of implements, equipment or labor used in the performance of the AGREEMENT or from any neglect, default, omission or want of proper care or misconduct on the part of the Contractor or of any one in his/her employ during the execution of the work. Such insurance shall include coverage for blasting and explosion if explosives are to be used.

17.2 Unless greater amounts of insurance coverage are required elsewhere in the Contract Documents, the Contractor shall also carry bodily injury and property damage insurance covering the operation of all motor vehicles and equipment engaged in this work.

17.3 INSURANCE – REQUIRED MINIMUM LIABILITY LIMITS

General Liability (Broad form Commercial), Bodily Injury and Property Damage \$1,000,000 per occurrence with an aggregate cap no less than \$3,000,000. In addition to the above, the following types of insurance must be included under the General Liability policy: comprehensive form, premises/operations; underground explosion & collapse hazard, products/completed operations; independent contractors, broad form property damage and personal injury.

Automobile Liability coverage, including coverage for owned, hired or non-owned autos: \$1,000,000 C.S.L.

Umbrella or Excess Liability coverage following form of underlying General and Automobile Liability coverage: \$2,000,000

Worker's Compensation coverage (per Massachusetts General Law) and **Employer's Liability** coverage: coverage A at statutory limits and coverage B at limits of \$100,000/\$500,000/\$100,000.

17.4 The Contractor shall carry any other types of insurance as may be required elsewhere in the Contract Documents. All insurance policies required in the Contract Documents shall be provided by companies satisfactory to the City.

17.5 A prerequisite to the execution of this AGREEMENT and prior to receiving a Notice to Proceed to start work under this AGREEMENT, the Contractor shall deposit with the City Engineer certificates of insurance from the insurers to the effect that the insurance policies required in the above paragraphs have been issued to the Contractor. The certificates must be on a form satisfactory to the City. The Contractor shall deliver certificates to the Department of Public Works, Attn: City Engineer, 135 Neil Street, Marlborough, MA 01752.

17.6 All required insurance shall be certified by a duly authorized representative of the insurer(s) on the "Accord Certificate of Insurance" form sample attached as Exhibit C. Properly executed certificates signifying adequate coverage in effect for the duration of the contract with renewal certificates issued not less than thirty (30) days prior to expiration of a policy period, must be submitted with the bid and on file with the City of Marlborough prior to commencement of this AGREEMENT. All policies shall be so written that the Owner will be notified in writing of any cancellation or amendment. No cancellation of any insurance whether by the insurer or by insured shall be effective unless written notice thereof is given to the City at least thirty (30) days prior to the intended effective date thereof, which date has been expressed in the notice. Prior to the effective date of any such cancellation the Contractor shall take out new insurance to cover the policies so canceled. The Insurance Companies shall remain liable, however, until new and satisfactory insurance policies have been delivered to and accepted by the City.

17.7 The Commercial/General Liability and Automobile Liability policies maintained by the Contractor pursuant to this Agreement shall provide that insurance applying to the City shall be primary, and that the City's own insurance shall be non-contributing. Any umbrella or excess liability policy shall follow form to the Commercial/General and Automobile liability policies.

17.8 All liability insurance policies maintained by the Contractor pursuant to this Agreement shall be endorsed to include the City of Marlborough as an additional insured.

17.9 If this Agreement is a multi-year contract, the Contractor shall be responsible for providing updated certificates, endorsed to include the City as an additional insured pursuant to section 17.6 above.

CONFLICT OF INTEREST (M.G.L. c. 268A)

18.1 The Contractor warrants that he/she has complied with all provisions of law regarding the award of this AGREEMENT and that he/she, or his/her employees, agents, officers, directors or trustees have not offered or attempted to offer anything of value to any employee of the City in connection with this AGREEMENT.

18.2 The Contractor further warrants that no elected official or employee of the City of Marlborough, including unpaid members of the City boards and commissions, serves as an officer, director, trustee or employee of Contractor, and that no elected official or employees of the City of Marlborough have or will have a direct or indirect financial interest in this AGREEMENT.

18.3 Violation of this Article shall be material breach of this AGREEMENT and shall be grounds for immediate termination of this AGREEMENT by the City without regard to any enforcement activities undertaken or completed by any enforcement agency.

18.4 Termination of this AGREEMENT pursuant to this Article shall not waive any claims for damages that the City may have against the Contractor resulting from Contractor's violation of the terms of this Article.

TAX COMPLIANCE (M.G.L. c. 62C, §49A)

19.1 The Contactor shall certify in writing, under penalties of perjury, that he/she has complied with all state laws relating to taxes, reporting of employees and contractors, and child support as required by M.G.L. c. 62C, §49A, as amended. A copy of the certificate shall be included as part of the contract documents.

UNEMPLOYMENT CONTRIBUTIONS (M.G.L. c. 151A, §19A)

20.1 The Contactor shall certify in writing, under penalties of perjury, that he/she has complied with all state laws relating to contributions and payments in lieu of contributions, as required by M.G.L. c. 151A, §19A, as amended. A copy of the certificate shall be included as part of the contract documents.

FINANCIAL REPORTING (M.G.L. c.30, §39R)

21.1 Section 39R. (a) The words defined herein shall have the meaning stated below whenever they appear in this section:

(1) "Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract pursuant to sections thirty-eight A 1/2 to thirty-eight O, inclusive, of chapter seven and any contract awarded or executed pursuant to section eleven C of chapter twenty-five A, section thirty-nine M of chapter thirty, or sections forty-four A to forty-four H, inclusive, of chapter one hundred and forty-nine, which is for an amount or estimated amount greater than one hundred thousand dollars (\$100,000.).

(2) "Contract" means any contract awarded or executed pursuant to sections thirty-eight A 1/2 to thirty-eight O, inclusive, of chapter seven and any contract awarded or executed pursuant to section eleven C of chapter twenty-five A, section thirty-nine M of chapter thirty, or sections forty-four A through forty-four H, inclusive, of chapter one hundred and forty-nine, which is for amount or estimated amount greater than one hundred thousand dollars.

(3) "Records" means books of original entry, accounts, checks, bank statements and all other banking documents, correspondence, memoranda, invoices, computer printouts, tapes, discs, papers and other documents or transcribed information of any type, whether expressed in ordinary or machine language.

(4) “Independent Certified Public Accountant” means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of his residence or principal office and who is in fact independent. In determining whether an accountant is independent with respect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant’s independence shall not be confined to the relationships existing in connection with the filing of reports with the awarding authority.

(5) “Audit”, when used in regard to financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepted accounting principles and auditing standards for the purpose of expressing a *certified* opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.

(6) “Accountant’s Report”, when used in regard to financial statements, means a document in which an independent certified public accountant indicates the scope of the audit which he has made and sets forth his opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed the reason therefore shall be stated. An accountant’s report shall include as a part thereof a signed statement by the responsible corporate officer attesting that management has fully disclosed all material facts to the independent certified public accountant, and that the audited financial statement is a true and complete statement of the financial condition of the contractor.

(7) “Management”, when used herein, means the chief executive officers, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the contractor.

(8) Accounting terms, unless otherwise defined herein, shall have a meaning in accordance with generally accepted accounting principles and auditing standards.

(b) Subsection (a)(2) hereof notwithstanding, every agreement or contract awarded or executed pursuant to sections thirty-eight A 1/2 to thirty-eight O, inclusive, of chapter seven, or eleven C of chapter twenty-five A, and pursuant to section thirty-nine M of chapter thirty or to section forty-four A through H, inclusive, of chapter one hundred and forty-nine, shall provide that:

(1) The contractor shall make, and keep for at least six years after final payment, books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the contractor, and

(2) until the expiration of six years after final payment, the office of inspector general, and the commissioner of capital asset management and maintenance shall have the right to examine any books, documents, papers or records of the contractor or of his subcontractors that directly pertain to, and involve transactions relating to, the contractor or his subcontractors, and

(3) if the agreement is a contract as defined herein, the contractor shall describe any change in the method of maintaining records or recording transactions which materially affect any statements filed with the awarding authority, including in his description the date of the change and reasons therefore, and shall accompany said description with a letter from the contractor’s independent certified public accountant approving or otherwise commenting on the changes, and

(4) if the agreement is a contract as defined herein, the contractor has filed a statement of management on internal accounting controls as set forth in paragraph (c) below prior to the execution of the contract, and

(5) if the agreement is a contract as defined herein, the contractor has filed prior to the execution of the contracts and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in paragraph (d) below.

(c) Every contractor awarded a contract shall file with the awarding authority a statement of management as to whether the system of internal accounting controls of the contractor and its subsidiaries reasonably assures that:

(1) transactions are executed in accordance with management's general and specific authorization;

(2) transactions are recorded as necessary

i. to permit preparation of financial statements in conformity with generally accepted accounting principles, and

ii. to maintain accountability for assets;

(3) access to assets is permitted only in accordance with management's general or specific authorization; and

(4) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

Every contractor awarded a contract shall also file with the awarding authority a statement prepared and signed by an independent certified public accountant, stating that he has examined the statement of management on internal accounting controls, and expressing an opinion as to

(1) whether the representations of management in response to this paragraph and paragraph (b) above are consistent with the result of management's evaluation of the system of internal accounting controls; and

(2) whether such representations of management are, in addition, reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant's financial statements.

(d) Every contractor awarded a contract by the commonwealth or by any political subdivision thereof shall annually file with the commissioner of capital asset management and maintenance during the term of the contract a financial statement prepared by an independent certified public accountant on the basis of an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report. Such statements shall be made available to the awarding authority upon request.

(e) The office of inspector general, the commissioner of capital asset management and maintenance and any other awarding authority shall enforce the provisions of this section. The commissioner of capital asset management and maintenance may after providing an opportunity for the inspector general and other interested parties to comment, promulgate pursuant to the provisions of chapter thirty A such rules, regulations and guidelines as are

necessary to effectuate the purposes of this section. Such rules, regulations and guidelines may be applicable to all awarding authorities. A contractor's failure to satisfy any of the requirements of this section may be grounds for debarment pursuant to section forty-four C of chapter one hundred and forty-nine.

(f) Records and statements required to be made, kept or filed under the provisions of this section shall not be public records as defined in section seven of chapter four and shall not be open to public inspection; provided, however, that such records and statements shall be made available pursuant to the provisions of clause (2) of paragraph (b).

SEVERABILITY

22.1 If any provision of this AGREEMENT is held invalid by any court or body of competent jurisdiction, the remainder of this AGREEMENT shall remain in full force and effect.

HEADINGS

23.1 The section headings in this AGREEMENT are for convenience and reference only and in no way define or limit the scope or content of this AGREEMENT or in any way affect its provisions.

AMENDMENTS

24.1 This AGREEMENT may be amended or modified only by written instrument specifically referencing this AGREEMENT duly executed by representatives of the parties authorized to bind the Contractor and the City.

24.2 All amendments to this AGREEMENT shall comply with M.G.L. c. 30, §39M, applicable sections of M.G.L. c. 149 and any other applicable provisions of the general laws of the Commonwealth of Massachusetts.

GOVERNING LAW

25.1 This AGREEMENT shall be governed by, construed, and enforced in accordance with the laws of the Commonwealth of Massachusetts.

(INTENTIONALLY LEFT BLANK)

ENTIRE AGREEMENT

26.1 This AGREEMENT contains the entire understanding of the parties and supersedes all prior agreements, representations, proposals and undertakings of the parties.

IN WITNESS WHEREOF, the Contractor has hereunto set his/her hand and seal, and the City has caused its corporate seal to be hereto affixed and this AGREEMENT to be executed in its name and behalf of the day and year first above written.

**CITY OF MARLBOROUGH
BY ITS MAYOR:**

**CONTRACTOR
BY:**

Nancy E. Stevens Date:

Date:

ATTESTED:

ATTESTED:

Lisa M.Thomas, City Clerk

APPROVED BY DEPARTMENT HEAD:

APPROVED AS TO FORM:

Ronald M. LaFreniere, Commissioner

Donald V. Rider, Jr., City Solicitor
Cynthia Panagore Griffin Assist. City Solicitor

CERTIFICATION OF FUNDING (c.44, §31C):

Diane Smith, Auditor, who certifies pursuant to §31C of Chapter 44 of the G.L. that an appropriation in the amount of the contract is available, that the Mayor of the City of Marlborough is authorized to execute said contract and approve all requisitions and change orders.

APPROVED AS TO PROCUREMENT:

Beverly J. Sleeper, Chief Procurement Officer, who Certifies that the services or supplies purchased or leased pursuant to this contract were, to the best of her belief and knowledge, procured pursuant to the general laws of the Commonwealth of Massachusetts Procurement Law: c30, §39M Contract # ED 2011-12

City of Marlborough
Marlborough, Massachusetts 01752



INSURANCE – REQUIRED LIABILITY LIMITS

a. GENERAL LIABILITY

Bodily Injury	\$1,000,000 each occurrence \$3,000,000 aggregate
Property Damage	\$1,000,000 each occurrence \$3,000,000 aggregate

The following types of insurance must be provided for under General Liability:

1. Broad Form Comprehensive (includes contractual, personal injury, property damage, malpractice)
2. Premises/operations
3. Underground explosion & collapse hazard
4. Products/completed operations
5. Independent contractors/subcontractors

b. AUTOMOBILE/VEHICLE LIABILITY

Bodily Injury	\$1,000,000 each occurrence \$3,000,000 aggregate
Property Damage	\$1,000,000 each occurrence \$3,000,000 aggregate

Auto/Vehicle Liability insurance must cover any vehicle (comprehensive)

c. UMBRELLA

As excess over General Liability and Workers Comp.	\$2,000,000 each occurrence \$2,000,000 aggregate
--	--

d. WORKER’S COMPENSATION

Worker’s Compensation Insurance shall be as required by the General Laws of the Commonwealth

e. EMPLOYER’S LIABILITY

Employer’s Liability insurance shall be provided with a policy limit of at least \$500,000.00.

ACKNOWLEDGEMENT OF OFFICER OF OWNER EXECUTING CONTRACT

State of _____

County of _____

On this _____ day of _____, 2011.

_____ to me known, who being by me duly sworn, did depose and say that he is the

_____ of _____ described in and which executed the foregoing instrument; that by virtue of the authority only conferred on him is subscribed his name to the foregoing instrument and executed the same for the purpose therein mentioned.

Notary

My Commission Expires _____
Date

SEAL

ACKNOWLEDGEMENT OF OFFICER OF OWNER ATTESTING CONTRACT

State of _____

County of _____

On this _____ day of _____, 2011

_____, to me known, who, being by me duly sworn, did
depose and say that he is the

_____ of _____ described in and
which executed the foregoing instrument; that he knows the seal of said

_____ that he is the official custodian of such
seal; and that he affixed it thereto and attested the same over his signature by virtue of the
authority in him invested.

Notary

My Commission Expires _____
Date

VOTE OF CORPORATION AUTHORIZING EXECUTION OF CONTRACT

At a meeting of the Board of Directors of _____, a Corporation duly organized under the laws of the Commonwealth of Massachusetts duly called and held on _____, at which a quorum was present and acting throughout, the following vote was duly adopted:

VOTED: That _____ the _____ of the Corporation, be and hereby is authorized to affix the corporate seal, sign and deliver in the name and behalf of the Corporation, a Contract with the City of Marlborough for the amount described in the

A TRUE COPY

ATTEST: _____

SEAL

REQUIRED FOR CONTRACTS WITH A VALUE OF \$100,000 OR MORE

CITY OF MARLBOROUGH
MARLBOROUGH, MASSACHUSETTS 01752-3812



REQUIRED CERTIFICATIONS
CERTIFICATE OF VOTE

I, _____, Clerk of _____, hereby certify that, at a meeting of the Board of Directors of said Corporation duly held on _____ which date is earlier than the contract to which this certificate is incorporated by reference, at which a quorum was present and voting throughout, the following vote was duly passed and is now in full force and effect:

“Voted: That _____ be and hereby is
(Name of Officer authorized to sign for Corporation)

authorized, directed and empowered for, in the name of and on behalf of this corporation, to sign, seal with the corporate seal, execute, acknowledge and deliver all contracts, bonds and other obligations of this Corporation; the executive of any such contract, bond or obligation by such (Name of Officer) _____ to be valid and binding upon this corporation for all purposes, and that a certificate of the Clerk of this Corporation setting forth this vote shall be delivered to the City of Marlborough; and that this vote shall remain in full force and effect unless and until the same has been altered, amended or revoked by a subsequent vote of such directors and a certificate of such later vote attested by the Clerk of this Corporation is delivered to the City of Marlborough.”

I, further certify that _____
(Name of Officer)

is the duly elected _____ of said corporation.
(Title)

Signed: _____
(Clerk – Secretary)

Place of Business: _____

Date of Contract: _____

Countersignature: _____
(Name and Title of Office)

Affix Corporate Seal

In the event that the Clerk or Secretary is the same person as the Officer authorized to sign that contract or other instrument for the Corporation, this Certificate must be countersigned by another officer of the Corporation.

Disclosure of Beneficial Interest

Page 1 of 2

Statement of Beneficial Interest required for all bids and proposals submitted by a governmental body, except proposals for Real Property Transactions which require a similar form required by M.G.L. Ch.7, §40J.

(1) Bid or Proposal for: _____

(2) Date Bid or Proposal Due: _____

(3) Print the true name and address of every firm, joint venture, corporation or person (as defined in M.G.L. Ch. 30B, §2) which have or will have direct or indirect beneficial interest in the contract. Disclose state of incorporation if applicable, and if out-of-state corporation, the true name and address of the Massachusetts agent or representative. This statement must be notarized.

1.

Name: _____

Address: _____

State of Incorporation: _____

If an out-of-state corporation, list true name and address of its Massachusetts agent/ representative:

Name: _____

Address: _____

2.

Name: _____

Address: _____

State of Incorporation: _____

If an out-of-state corporation, list true name and address of its Massachusetts agent/representative:

Name: _____

Address: _____

(COPY THIS FORM AS NECESSARY TO INCLUDE ALL INFORMATION)

Disclosure of Beneficial Interest

Page 2 of 2

(4) None of the above mentioned persons is an employee of the governmental body for which the enclosed solicitation is proposed or an official elected to public office in the Commonwealth of Massachusetts, except as listed below:

Signed Under Penalty of Perjury.

Name: _____ Date: _____

Title: _____

Commonwealth of Massachusetts, Middlesex, S.S.; Date: _____

Being duly sworn deposes and says that the information provided herein is true and sufficiently complete so as to not be misleading.

Subscribed and sworn before me this _____ day of _____, 2011.

Notary Public: _____

My Commission Expires: _____

GENERAL CONTRACTOR’S GUARANTEE FORM

(To be submitted in Duplicate after Completion of Contract Work)

Building: _____

Location: _____

Project No. _____

Date: _____

To: City of Marlborough

We (I) hereby guarantee all materials and workmanship, executed under the Agreement between the City of Marlborough and _____ dated _____.

(General Contractor)

for the construction of and change orders thereto, including revisions to Drawings and modifications to Specifications for a period of one (1) year from date of substantial completion, except for the following work which is guaranteed for the time indicated for the date of substantial completion as hereinafter noted:

_____ (Work) _____ (Subcontractor) _____ (Guarantee Period YEARS)

_____ (Work) _____ (Subcontractor) _____ (Guarantee Period YEARS)

_____ (Work) _____ (Subcontractor) _____ (Guarantee Period YEARS)

The guarantee is for all work whether executed by our own or our Subcontractor’s forces. Copies of all required guarantees executed by our various Subcontractors are attached.

We agree to correct or have correct, without cost to the City, any imperfect materials or equipment whether or not partially or completely covered by manufacturer’s guarantee, or which were not installed in accordance with the plans and specifications, at any time during the period of the guarantee. Any material or equipment which in the opinion of the Designer requires excessive service at any time during the first year of operation shall be considered defective and shall be replaced under this guarantee at no expense to the City. As to equipment or parts thereof which are replaced, the one (1) years guarantee, or longer, as per warranty and/or guarantee provisions, shall run from the approved date of substantial completion of the replaced equipment installation or parts thereof.

All items contained in the final punch list and corrected or replaced after the approved date of substantial completion shall extend the guarantee of those items to correspond to one year after their final completion.

All corrections to defective work will be done at the convenience of the City and will include all labor and material necessary to remove and replace any part of the building or its equipment installed under the Agreement noted above, where such removal may be necessary to complete the corrective work. We further agree to make, or have made, any corrections or adjustments to meet specified performance results.

Should the City, for its convenience, require the work to be done during other than regular working hours, the City shall pay all extra costs involved by such requirements.

It is understood that the City will give notice of observed defects with reasonable promptness and that all questions arising under this guarantee shall be decided by the Designer.

Approved date of substantial completion of the work: _____

Date of expiration of this guarantee: _____

SIGNED by General
Contractor:

Title of Officer: _____

SAMPLE

TO BE SUBMITTED ON CONTRACTOR'S LETTERHEAD

SAMPLE LETTER FROM CONTRACTOR REGARDING ACCOUNTING CONTROLS

DATE:

City of Marlborough – Department of Public Works
Thomas E. Cullen, Jr., P.E., City Engineer
135 Neil Street
Marlborough MA 01752

RE: Contract # ED 2011-12

Dear Mr. Cullen,

This letter is being submitted pursuant to M.G.L. Ch. 30 §39R(c). Please be advised that our firm has a system of internal accounting controls which assure that:

- (1) transactions are executed in accordance with management's general and specific authorization
- (2) transactions are recorded as necessary, to permit preparation of financial statements in conformity with generally accepted accounting principles, and to maintain accountability for assets
- (3) access to assets is permitted only in accordance with management's general or specific authorization; and
- (4) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

Sincerely,

(General Contractor)

REQUIRED FOR CONTRACTS WITH A VALUE OF \$100,000 OR MORE

SAMPLE

TO BE SUBMITTED ON C.P.A.'S LETTERHEAD

SAMPLE LETTER FROM CPA REGARDING CONTRACTOR ACCOUNTING
CONTROLS

DATE:

City of Marlborough – Department of Public Works
Thomas E. Cullen, Jr., P.E., City Engineer
135 Neil Street
Marlborough MA 01752

RE: Contract # ED 2011-12

Dear Mr. Cullen,

Please be advised that we have reviewed the Statement of Internal Accounting Controls prepared by the general contractor, NAME OF GENERAL CONTRACTOR, in connection with the above-captioned project. This statement is required under M.G.L. Ch. 30, § 39R. In our opinion, representations of management are consistent with our evolutions of the system of internal accounting controls. In addition, we believe that they are reasonable with respect to transactions as assets in the amount which would be material when measured in relation to the firm's financial statements.

Sincerely,

(C.P.A.)

Payment & Material Bond 100% of Contract Price

NOTES:

1. Bond must be made out to the City of Marlborough.
2. Contractor and Surety must sign the Bond.
3. Power of Attorney must have Surety's impressed seal or otherwise be an original.
4. Certification of full force and effect must be dated.

Performance Bond 100% of Contract Price

NOTES:

1. Bond must be made out to the City of Marlborough.
2. Contractor and Surety must sign the Bond.
- 3, Power of Attorney must have Surety's impressed seal or otherwise be an original.
4. Certification of full force and effect must be dated.

General Conditions

1. PERFORMANCE

A. PERSONNEL

The Contractor shall be responsible for all the acts and omissions of his employees and of all persons directly or indirectly employed by him in connection with the prosecution of this work. He shall employ competent persons, and if notified by the Engineer in writing that any person engaged upon the work is incompetent, unfaithful, disorderly or otherwise unsatisfactory then such person shall be discharged from the work. He shall be as fully responsible 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.

Any violation by the Contractor of state or federal laws relating to the employment of labor upon the work or the construction contemplated by this Contract shall be a sufficient cause for the City to cancel the Contract without in any way being liable in damages therefore. Should the City cancel the Contract because of the failure on the part of the Contractor to observe the state or federal laws, or the rules and regulations relating to employment and labor upon the work herein contemplated, then upon cancellation the City reserves all rights and benefits herein or by law provided against the Contractors for the breach of the conditions of this Contract.

B. FINANCING AGENCIES

Where contract undertakings of the City are funded, in whole or in part, by any state or federal agency, the City shall have the right to delegate any or all of its rights and responsibilities under this contract to said agencies.

2. INSPECTIONS

A. The City shall, at all times and places have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, contract, book of account, and other relevant data and records.

B. After receiving written notice that certain work or construction is improper, unsafe or defective or in any way fails to conform to the Contract, the Contractor shall forthwith remove such unsafe, improper or defective work and reconstruct the same in a manner satisfactory to the Engineer. Upon failure of the Contractor to remedy the work after being so notified, the Engineer may cause such defective work to be remedied or replaced and the City may deduct the cost thereof from any moneys due or to become due the Contractor.

C. If any work is covered up without approval of the City, it, must, if requested by the City, be uncovered at the expense of the Contractor. Should the City consider it necessary or advisable, at any time before final acceptance of the entire work, to make an examination of work already completed, by removing or tearing out same, the Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any material respect, the Contractor shall defray all expenses of such examination and of satisfactory reconstruction. If, however, such

work is found to meet the requirements of the Contract, the cost of uncovering and replacement shall be covered by an appropriate Change Order adjusting the Contract amount accordingly.

3. OTHER CONTRACTS

The Contractor shall cooperate fully with other Contractors and carefully fit his own work to that of other Contractors as may be directed by the City. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor.

4. FIREWOOD

The Contractor should anticipate that some property owners will wish to obtain a limited amount of firewood from tree removal operations under the Contract. Said property owners shall be given the opportunity to remove said firewood within a reasonable time. If, in the opinion of the Engineer, the wood is not removed within a reasonable time, the Contractor shall be responsible for removing it from the project.

5. PERMITS AND LICENSES

The Contractor shall secure and pay for all permits, fees, and licenses necessary for the proper execution and completion of the work. Where the City can arrange for the issuance of all or part of these permits, fees and licenses, without cost to the Contractor, the contract amount will be reduced accordingly.

6. WEATHER PROTECTION

Weather protection shall be installed in accordance with the specifications and in accordance with the standards established by the City. Adequate heat in the areas so protected must be provided as directed by the Engineer.

7. BLASTING

When the use of explosives is necessary for the execution of the work, the Contractor shall take the utmost care not to endanger life and property. Whenever directed, the number and size of the charge shall be reduced. The method of storage and handling of explosive and highly flammable materials shall conform with all state laws and regulations, as well as local requirements.

The Contractor is responsible for establishing pre-construction/blasting conditions which will include a pre-blast survey of all structures within 500 feet of the project limits. Care shall be taken to prevent injury to existing pipes or other structures and property above or below ground. Any damage caused as a result of the Contractor's work shall be the Contractor's responsibility.

Blasting operations are subject to the approval of the City of Marlborough Fire Chief. Explosive materials shall not be stored overnight, on site per the Marlborough Fire Department.

The successful Contractor must provide blasting details at all sites where blasting is to occur. The details are to be staffed by firefighters. No direct payment shall be made by the City to the Contractor for said details, the cost of which shall be included in the appropriate items unless otherwise provided for in the Contract. The Contractor must schedule the detail the day before the blasting operation. The permitting will be in accordance with 527 CMR 13.00, Massachusetts Fire Safety Code.

8. COMPLIANCE WITH CODES/REGULATIONS

It is the intent of this Contract that the Contractor shall base his bid upon the drawings and specifications, but that all work installed shall comply with all applicable codes and regulations, as amended by any waivers. Before installing the work, the Contractor shall examine the drawings and the specifications for compliance with applicable codes and regulations bearing on the work, and shall immediately report any discrepancy to the City. Where the requirements of the drawings and specifications fail to comply with the applicable code or regulation, the Contract shall be adjusted by Change Order to conform to the code or regulations.

9. DISCREPANCIES, LATENT CONDITIONS AND DEVIATIONS

A. By execution of this Contract, the Contractor warrants that he has visited the site of the proposed work and fully acquainted himself with construction and labor, and that he fully understands the facilities, difficulties and restrictions attending the execution of the work under the Bid/Contract Documents.

B. Should the Contractor encounter subsurface or latent conditions at the site materially differing from those provided for in this Contract, or unknown physical conditions differing materially from those inherent in work of the character provided for in this Contract, he shall promptly and before such conditions are disturbed, notify the City in writing.

C. Any discrepancies which may be discovered between actual conditions and those represented by the topographical maps and plans shall be reported to the City at once, and work shall not proceed, except at the Contractor's risk until written instructions have been received by him.

D. If the Contractor claims that any instructions by drawings or otherwise involve extra costs or extension of time, he shall, within ten (10) days after receipt of such instructions, and in any event before proceeding to execute the work, submit his protest in writing to the City.

E. If, on the basis of available evidence, the City determines that an adjustment of the contract price or time is justifiable, the procedure shall then be as provided herein for "Changes of Work."

F. If in the case of contracts for construction, reconstruction, alteration, remodeling or repair of any public building or public works, estimated to cost more than \$2,000.00 the provision of M.G.L. Ch. 30, §39N, as to latent conditions shall apply. Also, in this Contract, the provisions of Ch. 30, §39I as to deviations by Contractor shall apply.

10. CHANGES IN THE WORK

A. The City may make changes in the work of the Contractor by making alternations therein, or by making additions thereto, or by omitting work there from, without invalidating the contract, and without relieving or releasing the Contractor from any guarantee given by him pursuant to the Bid/Contract Documents, and without affecting the validity of the bond(s) and without relieving or releasing the surety or sureties of said bond(s). All such work shall be executed under the conditions of the Bid/Contract Documents.

B. Except in an emergency, no change shall be made by the Contractor unless he has received a prior written order from the City authorizing the change.

C. Any change in the work shall be ordered and the adjustment of the contract price or time shall be determined by one of the following methods:

(i) A price agreed upon between the parties and stipulated in the order for the extra work;

(ii) A price based on the unit of the Contract, if any;

(iii) A price determined by adding 15% to the reasonable cost to the Contractor of the extra work performed.

D. The Contractor shall keep an accurate, current account of the cost of such work and present it in such form, and substantiated by such supporting papers as the City may require. Upon completion and determination of the cost, a Change Order shall be issued establishing the increase or decrease in the contract price or contract time.

11. EXTENSION OF TIME

A. The right of the Contractor to proceed shall not be terminated nor the Contractor charged with liquidated damages because of any delays in the completion of the work due to unforeseeable causes 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 the government, fires, floods, epidemic, quarantine restrictions, strikes, freight embargoes, and unusually severe weather or delays, if the Contractor shall within 10 days from the beginning of such delay (unless the City shall grant a further period of time prior to the date of final settlement of the Contract) notify the City in writing of the cause of the delay. The City shall ascertain the facts and the extent of the delay, and shall extend the time for completing the work when in its judgment the findings of fact of the City justify such an extension, and its findings of fact thereon shall be final and conclusive upon the parties to this Contract.

12. ACCEPTANCE FOR PARTIAL OCCUPANCY

A. The Contractor shall notify the City in writing, as to the date when in his opinion all or a designated portion of the work will be substantially completed and ready for inspection.

B. The City, at its option, may occupy any of the dwelling units, buildings, or other portions of the project as such portions are inspected and accepted by the City upon the following terms:

- (1) The occupancy or use of any space in the project shall not relieve the Contractor of liability to perform any work required by the Contract, but not completed at the time of said occupancy
- (2) The Contractor shall be relieved of all maintenance costs on the building occupied under this Contract.
- (3) The Contractor shall not be responsible for wear and tear or damage resulting from said occupancy
- (4) The City shall assume risk or loss with respect to any building occupied by it under the terms of this Contract, provided the Contractor shall assume full responsibility for loss or damage traceable to his fault or negligence in the performance of his Contract.
- (5) The Contractor shall not be required to furnish heat, light, power, and water used in the buildings occupied without proper remuneration therefore.

13. INSURANCE

A. PUBLIC LIABILITY

The Contractor shall carry Manufacturers' and Contractors' Public Liability Insurance with an insurance company satisfactory to the City insuring against all claims for bodily injury, death, and injury to or destruction of property caused by accidents resulting from the use of implements, equipment, or labor in the performance of the Contract, and against any claims for damages due to any neglect, default, omission, or want of proper care or misconduct on the part of the Contractor or of anyone in his employ during the execution of the work. Such insurance shall include coverage for blasting and explosion if explosives are to be used.

B. BUILDER'S RISK

The Contractor shall carry Builder's Risk (fire and extended coverage) Insurance upon all work in place and/or materials stored at the building site including foundations and building equipment. The Builder's Risk Insurance shall be for the benefit of the Contractor and the City as their interests may appear and each shall be named in the policy or policies as an assured. The Contractor in installing equipment from the time he takes possession thereof until his contract work is accepted by the City. Builder's Risk Insurance need not be carried on excavations, piers, footing, or foundation until such time as work on the superstructure is started. It need not be carried on landscape work. Policies shall furnish coverage at all times for the full cash value of all completed construction, as well as materials in place and/or stored at the site, whether or not the partial payment has been made by the City. The Contractor may terminate this insurance on buildings taken over for occupancy by the City as of the date said buildings are taken over.

C. VEHICLES

The Contractor shall also carry bodily injury and property damage insurance covering the operation of all motor vehicles by the Contractor and engaged in this work,

D. WORKMAN'S COMPENSATION

The Contractor shall, before commencing the work, provide by insurance for the payment of compensation and the furnishing of other benefits under M.G.L. Ch. 152 of (Ter. Ed.) to all persons employed under the Contract, and he shall continue such insurance in force and effect during the term thereof. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the contract and shall entitle the City to terminate the Contract without in any way being liable in damages therefore.

(The above providing is required by M.G.L. Ch. 149, §34A included in every contract for the construction, alternation, maintenance, repair, or demolition of, or addition to, any public building or other public works for the Commonwealth or any political subdivision thereof.)

The statute further states as follows:

“No officer or agent contracting in behalf of the Commonwealth or any political subdivision thereof shall award such a contract until he has been furnished with sufficient proof of compliance with the aforesaid stipulations. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the contract and shall operate as an immediate termination thereof. No cancellation of such insurance, whether by the insurer or by the insured, shall be valid unless written notice thereof is given by the party proposing cancellation to the other party and to the officer or agent who awarded the contract at least fifteen days prior to the effective date thereof, which date shall be expressed in said notice. Notice of cancellation sent by the party proposing cancellation by registered mail, postage prepaid, with a return receipt of the addressee requested, shall be sufficient notice. An affidavit of any officer, agent or employee of insurer or of the insured, as a case may be, duly authorized for the purpose that he has so sent such notice addressed as aforesaid shall be prima facie evidence of the sending thereof as aforesaid. This section shall apply to the legal representative, trustee in bankruptcy, receiver, assignee, trustee and the successor in interest of any such Contractor. The superior court shall have jurisdiction in equity to enforce this section.”

“Whoever violates any provision of this section shall be punished by a fine of not more than one hundred dollars or by imprisonment for six months or both and in addition any Contractor who violates any provision directly or indirectly with the Commonwealth or any political subdivision thereof for the construction, alteration, demolition, maintenance, or repair of, or addition to any public works building for a period of two years from the date of conviction of said violation.”

E. COVERAGE

The amounts of such insurance shall not be less than the minimum amounts set forth in the Contract Form section of the contract documents. The insurance policies are to

provide that all notice by the insurer to the insured pertaining to coverage required under this Contract shall simultaneously be given to the City.

F. CERTIFICATES

Prior to starting work in this Contract, the Contractor shall deposit with the Engineer certificates to the City from the insurers to the effect that the insurance policies required by this Article have been issued to the Contractor. The certificates must be approved by the City.

G. TERMINATION OR CANCELLATION

No termination or cancellation of any insurance, including performance bonds, whether by the insurer or by insured, shall be effective unless written notice thereof, as evidence by return receipt of registered letter, is given to the City at least fifteen days prior to the intended effective date thereof, which date has been expressed in the notice. Prior to the effective date of an such termination or cancellation, the Contractor must take out new insurance to cover the policies so cancelled or risk termination of the Contract for lack of insurance coverage.

14. INDEMNIFICATION

A. LIABILITIES

The Contractor shall indemnify and save harmless the City and all of its officers, agents and employees against all suits, claims or liabilities of every name, nature, and description arising out of or in consequence of the acts of the Contractor and/or his failure to comply with the terms and conditions thereof, and shall, at its own expense, investigate all such claims and demands, attend to their settlement or other disposition, defend all actions based thereon and pay all charges of attorneys and all other costs and expenses of any kind arising from such liability, damage, loss, claims, demands and actions, and shall, if required by the City provide a bond at no cost to the City in such sum and with such sureties as shall be approved by the City conditioned to indemnify and save the City harmless as aforesaid. The Contractor shall have responsibility for the supervision of the services and the City shall not, in any manner, be answerable or accountable for any violation of municipal, state or federal law by the Contractor. The Contractor hereby covenants, and agrees to indemnify and hold harmless the City from any loss, damage or expense incurred by the City from any result of any violation of municipal, state or federal law by the Contractor, its agents, servants or employees.

B. EXPLOSIVES

The Contractor shall bear all losses resulting from the use or storage of explosives and highly flammable materials and shall save the City harmless from all claims for bodily injuries or death to any person and from all claims for property damage or destruction arising out of the use or storage of explosives and highly flammable materials.

15. DELAYS CAUSED BY THE CITY

A. The City may order the Contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the

convenience of the City, provided however, that if there is a suspension, delay or interrupting for fifteen days or more or due to a failure of the City to act within the time specified in this Contract, the City shall make an adjustment in the contract price for any increase in the cost of performance of this Contract, but shall not include any profit to the Contractor on such increase and provided further that the City shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this Contract provides for an equitable adjustment of the contract price under any other contract provision.

B. The Contractor must submit the amount of a claim under provision A to the City in writing as soon as practicable after the end of the suspension, delay, interruption, or failure to act and in any event, not later than the date of final payment under this Contract and except for costs due to a suspension order, the City shall not approve any costs in the claim incurred more than twenty days before the Contractor notified the City in writing of the act of failure to act involved in the claim.

C. In the event a suspension, delay, interruption or failure to act of the City increases the cost of performance to any Subcontractor, that Subcontractor shall have the same rights against the Contractor for payment for an increase in the cost of his performance as provisions A and B give the Contractor against the City, but nothing in provisions A and B shall in any way change, modify or alter any other rights which the Contractor or the Subcontractor may have against each other.

(Note: M.G.L. Ch. 30, §39-O requires that paragraphs A and B above be incorporated in all contracts subject to Chapter 30, Section 39M or Chapter 149, Section 44A.)

16. DELAYS CAUSED BY THE CONTRACTOR; LIQUIDATED DAMAGES

The City and the Contractor recognize that time is of the essence of this Contract and that the City will suffer financial loss if the work is not completed within the contract time specified herein, plus any extensions thereof allowed in accordance with the Contract. They also recognize the delays, expense and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by the City if the work is not completed on time. Accordingly, instead of requiring any such proof, the City and Contractor agree that as liquidated damages for delay (but not as a penalty) the Contractor shall (without prejudice to the right of the City to terminate the Contractor by reason of Contractor default) pay to the City the “per diem” liquidated damages figure set forth in the General Conditions of the Bid for each calendar day of delay until the work is completed or until the City elects to terminate the contract for default, if in fact such termination does take place, whichever date first occurs.

17. FAILURE OF PERFORMANCE

A. INTERVENTION

If the rate of progress is not satisfactory, the City may notify the Contractor from time to time to increase the force, equipment, and plant, or any of them, employed on the whole or any part of the work, stating the amount of increase required. Unless the Contractor shall, within five days after such notice, increase his force, equipment and plant to the extent required therein, and maintain and employ the same from day to day until the

completion of the work or such part thereof, or until the rate of progress, in the opinion of the City is satisfactory. The City may, in lieu of terminating the Contract for default, employ and direct the labors of such additional force and equipment as may be necessary to assure completion of the work or any part thereof within the time specified in the Contract or at the earliest possible date thereafter, and charge the expense thereof to the Contractor. For the purposes of such completion the City may for itself or for any Contractors employed by the City take possession of and use or cause to be used any and all materials, equipment, plant, machinery, appliances, tools, supplies and such other items of every description that may be found or located at the site of the work.

B. SUSPENSION

(1) The City shall have the right to suspend the work wholly or in part because of unsuitable weather conditions, for other causes unfavorable to the satisfactory prosecution of the work, or for such time as it may deem necessary due to the failure of the Contractor to perform any provisions of the Contract. Upon receipt of written order from the City the Contractor shall immediately suspend the work or such part thereof in accordance with the order. The work shall be resumed when conditions so warrant or deficiencies have been corrected as ordered in writing by the City. Except when the cause of suspension is not the fault of the Contractor or not attributable to his failure to meet his obligations under the Contract, no allowance of any kind will be made for suspension of work by order of the City hereunder.

(2) In the case of contracts for the construction, reconstruction, alteration, remodeling, or repair of any public building or public works, estimated to cost more than two thousand dollars (\$2,000), the provision of M.G.L. Ch. 30, §39-O with respect to suspension of the work shall apply.

C. TERMINATION

(1) If the Contractor refuses or fails to prosecute the work or any separable part thereof, with such diligence as will assure its completion within the time specified in this Contract, or any extension thereof, or fails to compete said work within such time, the City may, by written notice to the Contractor, terminate his right to proceed with the work or such part of the work as to which there has been delay. In such event, the City may take over the work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completing the work such materials, appliances, and plant as may be on the site of the work. The Contractor and his sureties shall be liable to the City in completing the work, including administrative, architectural, and legal fees.

(2) If the Contractor shall be adjudged bankrupt or if he shall make a general assignment for the benefit of his creditors or if a receiver of his property shall be appointed, or if the work to be done under the Contract shall be abandoned, or if the Contract or any part thereof shall be sublet without the previous written consent of the City, or if the Contract or any claim there under shall be assigned by the Contractor otherwise than as herein specified, or if the Contractor's insurance policies required by this Contract are cancelled or allowed to expire, or if the Contractor has substantially violated any of the provision of the Contract, the City may notify the Contractor to discontinue all work, or any part thereof, and thereupon the Contractor shall discontinue such work or any part thereof as the City may designate, remove his equipment, tools, supplies and materials, and the

City may thereupon, by Contract or otherwise, complete the work, or such part thereof, and charge any excess cost to the Contractor as in (1) above.

(3) In the event the Contractor shall fail to furnish the services as required after the execution of the Contract or in the event said services are performed in a negligent manner, the City may obtain the services from any other individual or entity, provided that the City shall give to the Contractor notice that the Contractor has failed to carry out the Contract to the satisfaction of the City and in that event, and at its discretion and without further notice, the City can cancel this Contract.

D. WITHHOLDING OF COST

All costs, expenses, losses, damages, attorney's fees and any and all other charges incurred by the City under this subsection shall be charged against the Contractor and deducted and/or paid by the City out of any moneys due or payable or to become due or payable under the contract to the Contractor. In computing the amounts chargeable to the Contractor, the City shall not be held to a basis of the lowest prices for which the completion of the work or any part thereof might have been accomplished, but all sums actually paid or obligated therefore to affect the prompt completion shall be charged to and against the account of the Contractor. In case the costs, expenses, losses, damages, attorney's fees and other charges together with all payments theretofore made to or for the account the Contractor are less than the sum which would have been payable under the Contract if the work had been properly performed and completed by the Contractor, the Contractor shall be entitled to receive the difference, and in case such costs, expenses, losses, damages, attorney's fees and other charges, together with all payments theretofore made to or for the account of the Contractor shall exceed the sum, the Contractor shall pay the amount of the excess to the City.

18. ROYALTIES AND PATENTS

The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the City harmless from loss on account thereof, except that the City shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has reason to believe that the design, process, or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the City.

19. WARRANTY OF WORKMANSHIP AND MATERIALS

A. The Contractor warrants to the City that all materials and equipment furnished under the Contract will be new unless otherwise specified, and that all work will be of good quality, free from faults and defects, and in conformance with the Contract. Where the materials, equipment, articles or workmanship are referred to in the Technical Specification as "equal to" any particular standard, the City shall decide the question of equality. Before any material is incorporated into the work under this Contract, the Contractor may be required to furnish, without expense to the City, a complete statement attesting to the origin, composition and manufacture of any or all materials proposed to be used in the construction of the work, together with samples, which samples may be subjected to the tests required by the City to determine the quality and fitness of the

material. In any event, all materials shall meet the Massachusetts Highway Standard Specifications previously referenced.

B. The Contractor shall promptly remedy any defects due to faulty materials or workmanship and pay for any damage to the work resulting there from which shall appear within a period of one year from the date of the City's use or occupancy of the project as a whole. In the event that the project is scheduled to be completed in specific groups or portions, or the City, at its election, accepts groups or portions of the project for use or occupancy, then the warranty period for such group or portion will commence at the time of its completion or acceptance. The City shall give notice of observed defects with reasonable promptness.

C. If the Contractor neglects to start such repairs within thirty (30) days of the date of giving him notice thereof and to complete the same to the satisfaction of the City with reasonable dispatch, the City may employ other persons to make such repairs. The City shall charge the expenses therefore to the Contractor and may use any moneys still retained to pay for same, and if such sum is insufficient the Contractor shall be obligated to pay the balance thereof.

D. Neither partial or final payment, nor any provision in this article, nor partial or entire use or occupancy of the premises by the City shall constitute an acceptance of work not done in accordance with the Contractor or relieve the Contractor of liability in respect to any express warranties, special guarantees, or in respect to faulty materials or workmanship, in accordance with the law of the place of building.

20. WARRANTY OF TITLE

A., The Contractor warrants good title to all materials, supplies and equipment incorporated in the work and agrees to deliver the premises together with all improvements thereon free from any claim, liens, or charges, and agrees further that neither he nor any other person, firm or corporation shall have any right to a lien upon the premises or anything appurtenant thereof.

21. AS-BUILT PLANS

The Contractor shall furnish electronic and hard copy "As-Built" plans of the completed Project to the Engineer prior to final acceptance of the Project by the City. To begin this process, the City will supply to the contractor a set of electronic CAD files of the Contract Drawings in a blank as-built format. These drawings will contain all relevant information regarding all approved conditions of the job. They will not, however, contain any horizontal or vertical information for any water, drainage, sewerage or other utilities installed, elevations, design, etc. Any element of the site modified and/or adjusted as part of this project must be noted and the as-built information supplied on the drawings. Ample space and parenthetical blanks will be present for this information. The contractor's engineer shall also locate the curb line, edge of pavement, retaining walls and show and/or label the center line elevations on the as-built drawings.

When the electronic plans supplied to the contractor by the City of Marlborough have been filled in with all appropriate as-built information, the contractor shall submit a set of **preliminary** plans for review by the City. The plans supplied by the contractor or his engineer to the City contain the as-built data as described above. All as-built information

supplied by the contractor shall be in **RED** ink and **ITALICIZED** so as to signify that it is the final information. There shall also be an indication of this in the legend and a brief explanation. This first set of as-built plans does not have to be certified by an engineer or contain the required signatures. These are for our review only. After review, the City of Marlborough will notify the contractor of any changes or corrections that need to be made. Upon approval, the set of plans will be returned to the Contractor. The contractor will then acquire the necessary certifications and signatures for final submission of the final as-built drawings produced on Mylar.

The contractor's engineer shall also provide the following certifications as part of his as-built drawings submittal:

1. I hereby certify that the information shown on this/these plan(s) accurately depicts field conditions based on an as-built survey by (*name of as-built surveyor*) performed on (*date of as-built survey*)
2. I hereby certify that the as-built information shown on this plan is in conformance with the approved site plans dated (date of contract plan).
3. I hereby certify that all sidewalks, handicap wheelchair ramps and driveway aprons conform to the latest standards and requirements of the Massachusetts Access Board, American Disability Act and the Architectural Access Board.

Electronic As-built Drawing Set

The contractor shall also provide this office with a complete electronic as-built drawing set. All as-built files must be compatible with the current version of AutoCAD the City uses and accepts. Check with the City of Marlborough Engineering Department for the latest version accepted. The as-built electronic plans will use the digital base map information provided by the City of Marlborough as the base for all additional information. The City of Marlborough's base maps are tied to the North American Datum of 1983 (NAD83) and the North American Vertical Datum of 1988 (NAVD88). All features shall be further stored in the Massachusetts State Plane Coordinate System. This will allow integration into the City's Geographic Information System.

The electronic as-built drawing set shall conform to the minimum standards specified in this section. All as-built drawing information shall accurately represent as-built construction and shall be graphically and mathematically correct, i.e. drawing objects shall represent changes in dimensioning during construction. There should be complete consistency between final electronic and hard copy information. The electronic files should allow the City of Marlborough to reproduce hard copies if needed.

Plan and Profile:

1. All as-built information shall be placed on its own layer entitled "AS_BUILT_INFO"
2. Include and attach all detail information generated by automated design software that describe any infrastructure components.
3. Non-referenced images, standard drawings, specifications, and/or blocks shall be bound in the drawing and not attached as an external reference.
4. If registered orthophotography is used as a backdrop, the image and registration file

along with directory information, shall be provided.

5. Transportation plans for Signal or Detection systems, Street Lighting, or Roadway Striping/Signing shall each be submitted in individual AutoCAD drawing files.

Plot Layout/Plot Settings:

1. Submit all information required to reproduce a hard copy from the submitted electronic file.
2. Standard pre-installed AutoCAD font and line types shall be used.

Referenced Information

1. If X-refs are used with a drawing, bind all X-refs before submission. The City will not accept drawing with X-refs.
2. Purge all invisible drawing objects before submission.

Drawing Objects (Entities)

1. All as-built infrastructure components shall conform to the City's layering convention as stated above.
2. Purge all drawings of empty layers and unused blocks, line types, dimension styles, plot styles, text styles, shapes, etc., and make sure all infrastructure components are clean, that is:
 1. Ends of arcs, lines and p-lines are snapped end-point to end-point.
 2. Remove duplicate objects.
 3. Features representing areas (detention ponds, etc.) are composed of closed p-lines are at a minimum a series of valid objects snapped end-to-end with no gaps.
3. All drawing objects required for updating City inventories shall be easily assessable for extraction.
4. All infrastructure components shall be composed of the following valid object types in order to be accepted by the City:
 1. Arc.
 2. Circle.
 3. Dimension.
 4. Ellipse (including elliptical arcs).
 5. Image.
 6. Insert (also known as a Block Reference).
 7. Leader.
 8. Line.
 9. Multiline Text.
 10. Point.
 11. Polyline.
 12. Text.

Ownership:

All electronic files and hard copy maps submitted to the City of Marlborough upon completion of the project will become the sole property of the City of Marlborough. The City gains the right to ownership of all content for any future use. Electronic files will be submitted with full editing privileges allowing any future edits to be made by the City of Marlborough at a later date.

22. INTERPRETATIONS

All decisions on interpretation of the Bid/Contract Documents, approval, or progress of the work shall be made promptly and, in any event, no later than thirty (30) days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty-day period and the date by which the decision will be made.

(Note: M.G.L. Ch. 30, §39P requires that this provision appear in all Contracts subject to Ch. 30, §39M or Ch. 149., §44A.)

23. GENERAL

All Specifications and all Special Conditions contained in the bid/contract documents are to be used in conjunction with, and in addition to, the 1988 Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges (current). In all cases, the more stringent Specifications and Special Conditions will apply. The drawings in the Commonwealth of Massachusetts Department of Public Works Construction Standards, 1977 Standards are hereby incorporated by reference.

Additional drawings or directions showing details in accordance with which work is to be done will be furnished from time to time by the Engineer, if found necessary.

The Contractor shall furnish all labor, services, materials, equipment, plant, machinery, apparatus, tools, supplies and all other things necessary to do all work required for the completion of each item of the work and as herein specified. The work to be done and paid for under any item shall include all incidental work necessary or customarily done for the completion of a first class job for that item.

The Contractor shall be responsible for establishing a reproducible construction baseline prior to construction and setting and maintaining line and grade for the duration of the project. All work carried out for line, grade and quality control shall be under the direct supervision of a Registered Professional Engineer (referred to as the Contractor's Engineer) being licensed to practice in the Commonwealth of Massachusetts.

24. WORK TO BE DONE BY OTHERS

The NSTAR Service Company, Massachusetts Electric, Verizon, and Com Cast/AT&T Broadband will, at their own expense, relocate their respective utilities as required.

The above work is expected to be carried out at the same time and in cooperation with the Contractor. No additional compensations will be allowed for any delay or inconvenience caused by these operations or other operations for adjustment,

North Reading Transportation
4 Municipal Drive
Hudson, MA 01749
School Bus Company

(978) 562-5186

“DIG SAFE” Call Center 1-888-344-7233

The Contractor is advised to verify the locations of existing overhead and subsurface utilities in the vicinity of this project with the local utility companies.

Before the Contractor begins any work or operation which might damage any subsurface structures, he shall carefully locate all such structures and conduct his operations so as to avoid any damage to them. If the Contractor wishes to have any utilities temporarily relocated for his own convenience, he shall make the necessary arrangements with the utility company and reimburse them at his own expense for the cost of the work.

The Contractor shall dig test pits at the direction of the Engineer at the contract price.

26. LOCAL LICENSING REQUIREMENTS

The successful bidder on this project will be required to secure all permits and licenses necessary for the proper execution and completion of the work. The standard licensing fees shall be waived for the purposes of this contract; however, all other licensing requirements shall be met and the Contractor shall thoroughly familiarize himself with the standard licensing requirements of the City of Marlborough.

27. WEEKLY PAYROLL RECORDS

This project is subject to the Massachusetts Prevailing Wage Law (M.G.L. Ch. 149, §26-27).

The Contractor must submit weekly payroll records to the awarding authority of all employees who have work on the project before any payments can be made.

28. AUTHORITY OF THE OWNER

The City Engineer or his designee shall be the sole judge of the intent and meaning of the Contract and his decision thereon and his interpretation thereof, shall be final, conclusive and binding on all parties. The City Engineer shall be the City's representative during the life of the Contract as directed, instructed, determined or decided by said City Engineer. Approval of the Subcontractor(s) by the City Engineer is necessary before the start of work by said Subcontractor.

29. CONTRACTOR'S QUALIFICATIONS AND OBLIGATIONS

Attention is directed to the provisions of Article 32 of Mass. Standard Specifications relating to the rights of public service corporations and municipal departments to enter the site of the improvements and to alter, replace and/or install facilities at some time when the Contractor will be prosecuting other required work contiguous thereto. The Contractor shall cooperate fully with requirements under said Article.

The Contractor's attention is directed to the fact that all applicable State Laws, Municipal Ordinances and Rules and Regulations of all authorities having jurisdiction shall apply to the Contract throughout, and they will deem to be included in the Contract the same as though herein written out in full.

30. ARBITRATION

All questions and issues of dispute which cannot otherwise be settled may be submitted to arbitration in accordance with Construction Industry Arbitration Rules of the American Arbitration Association then obtaining, but only in the event both parties to this Contract so agree to such submission for arbitration. If both parties to this Contract fail to agree to submit to arbitration in the manner described herein or to submit to arbitration in any mutually acceptable form, all questions and issues in dispute may be submitted to a court of competent jurisdiction of the Commonwealth of Massachusetts.

31. EXTRA WORK: LIMITS OF WORK

No payment for extra work of any kind will be allowed unless expressly approved and authorized by the City in writing through a signed Change Order. Limits of work and descriptive notes on contract drawings are approximate and are only intended to generally describe the area of work required to achieve the correct improvements sought under this Contract.

32. PROTECTION AND RESTORATION OF PROPERTY

Special care shall be exercised to prevent any disturbance to and protect such underground public service structures and facilities as may be near any work to be done by the Contractor. In addition, care shall be taken to keep heavy equipment and miscellaneous machinery off any private property. Any damages incurred by private homeowners as a result of this construction shall be repaired at the expense of the Contractor.

33. HOURS OF WORK

The hours of work shall be between 7:00 A.M. and 3:30 P.M., Monday through Friday. There will be no work authorized beyond these limits unless expressly approved and authorized by the City or unless otherwise provided in the Contract.

34. DIG SAFE

The Contractor's attention is directed to Ch. 502 of the Acts of 1980 as they apply to excavations in general. The Contractor shall be responsible for complying with all aspects of this regulation prior to proceeding with any excavation.

Special Conditions

SPECIAL CONDITIONS

Reconstruction of Various Streets and Appurtenant Work

Contract ED 2011-12

The subject roads are located within residential neighborhoods. Every attempt is to be made to minimize disruption to the residents during construction. Where possible, access to residences, school bus traffic, emergency response vehicles, solid waste/recycling vehicles (Berkley Street, Edinboro Street, Gates Avenue-Thursday typically and Wood Road-Friday typically) shall be maintained, and dust control is crucial. Adherence to hours of work is anticipated.

All work shall also be performed in accordance with the Code of the City of Marlborough, with all construction and materials shall be approved by the Engineering Division of the Department of Public Works. Reference is made to the Massachusetts Highway Department's Standard Drawings, which are hereby made part of this contract.

The work consists of reclaiming the existing pavement and gravel base to produce a 12" reclaimed gravel base. The roads will be graded and compacted to the lines and thicknesses as indicated in the contract documents. Excess reclaimed material not utilized on the reconstruction project shall be removed from the site and disposed of as directed/approved by the Engineer. This excavation shall be included in the contract unit price for item 403.0, Reclaimed Base. Careful attention is to be paid while grading work is accomplished to ensure positive drainage to the catch basins. Silt sacks, are to be installed in catch basins prior to construction to prevent the introduction of sediment into the City's storm system. All underground utility work shall be performed prior to the reclamation process.

After the binder course of pavement has been placed (roadway), any excavation within the paved surface with the exception of setting granite curbing and/or structure adjustment will be backfilled using control density fill (flowable fill). Prior to the placement of bituminous concrete (top course), the contractor will demonstrate in a manner satisfactory to the Engineer that positive drainage is maintained.

In general, the existing roadway profile is to be reconstructed with a 3/8" per foot centerline crown however; modifications may be directed by the Engineer. It may be necessary to remove some sub-grade material to achieve proposed grade. To that end, the reclaimed base course will be windrowed to one side, sub-grade excavated to the depth necessary, and the reclaimed material placed back over the sub-grade this excavation shall be included in the contract unit price for item 403.0, Reclaimed Base. The contractor shall be responsible for maintaining a 6-inch curb reveal from the bituminous concrete top course. The stockpiled reclaimed material, if it meets the gradation requirements for Gravel Borrow – Type C, shall be used for sidewalk gravel. Payment for stockpiling, spreading, fine grading and compaction shall be included in the contract unit price specified for item 170. Both gradation and compaction tests (50 foot

intervals as specified by the engineer, 97% compaction required) and all other areas shall be included in the price specified for item 403, Reclaimed Base Course. Both gradation and compaction tests shall be performed 24 hours prior to the binder course of pavement being placed.

The work shall consist of furnishing all labor, materials, tools, equipment for removal/disposal of drain line(s), structures, replacement, dewatering, proving, flushing, and connection to all proposed and existing structures. All precast manholes/catch basins shall be cored in the field and/or precast cut outs for proper connection. The work shall also include any/all temporary plating, bedding, excavation support backfilling compaction and restoring the excavation trench area with pavement back to finish grade as shown on the design plans/details

The Contractors attention is directed to the regulations of the commonwealth of Massachusetts Architectural Access Board. As to the construction of sidewalks, wheelchair ramps and other improvements shall conform to these regulations. Existing sidewalks adjacent to the roadway (that are scheduled to be reconstructed) shall be done in accordance with same. Prior to placement of the top course of bituminous concrete sidewalk and/or once the forms have been set for the cement concrete sidewalks (which ever is applicable), the contractor is to notify the Engineer and provide to him any survey work necessary to demonstrate that the sidewalk when completed will be in conformance with the regulations of the Architectural Access Board, American Disability Act and the Massachusetts Highway Department.

Berkley Street

Berkley Street will be reconstructed and resurfaced in its entirety. The roadway section is approximately 1,500 feet in length and varies in width from 19-28 feet. The new (proposed) pavement section will be uniformly constructed to 24 feet within the reclaimed area. Berkley Street will be reclaimed from Edinboro Street to Plymouth Street, approximately 825 feet. The roadway will be resurfaced from Plymouth Street to the cul-de-sac, approximately 675 feet keeping the existing pavement section varying from 24-28 feet with the exception of the cul-de-sac. All subsurface work that will be taken place is within the reclaimed area. This work will include drainage improvements, a water service replacement and sewer extension to accommodate a new sewer service.

Edinboro Street

Edinboro Street will be resurfaced in its entirety. The roadway section is approximately 2,280 feet in length and varies in width from 21-27 feet. The new (proposed) pavement section will be resurfaced holding the existing variable width. Edinboro Street will be cold planed and resurfaced from Maple Street to the cul-de-sac. The existing lead water services will be removed and replaced with $\frac{3}{4}$ " copper tubing type-k as depicted on the construction drawings. The backfill material will be flowable fill (excavatable) as shown on trench details sheet located within contract drawings. Extra care is to be taken along the newly constructed sidewalk and not to be disturbed outside of water service replacement limits.

Gates Avenue

Gates Avenue will be reconstructed (reclaimed) in its entirety. This section of roadway is approximately 332 feet in length and varies in width from 24-26 feet. The new (proposed) pavement section will be uniformly constructed to 24 feet. Both existing concrete sidewalks are to be removed and replaced with bituminous concrete. The existing lead water services will be removed and replaced with ¾" copper tubing type-k as depicted on the construction drawings. There is also a section of existing 4" CI water main that is to be removed and replaced with 6" DI (see contract drawings for specifics).

Wood Road

Wood Road will be constructed (reclaimed) in its entirety. This section of roadway is approximately 751 feet in length and varies in width from 37-38 feet. The new (proposed) pavement section will be uniformly constructed to 38 feet. The existing 6' bituminous concrete sidewalk will be reconstructed in its entirety. There will be a 6" sub-drain installed along the southerly side of Wood Road as depicted on construction drawings. Water improvements will be made by replacing the existing service saddles with bronze saddles at the locations shown on said plans.

Specifications

The following subsections describe the measurement of and payment for the work to be done under specific items listed in the Proposal. If any item is not included herein, the provisions of the MDPW Standard Specifications shall apply. The unit price or lump sum price for various items of work as listed in the Proposal, under this Contract, shall prevail without any adjustment of quantity over and above that measured for payment or in price as may be allowed under the MDPW Standard Specification.

Each unit or lump sum price stated in the Bid shall constitute full compensation as herein specified, for each item of work completed in accordance with the Drawings and Specifications including handling water and cleaning up all debris, excess materials and site restoration. The prices for those items which involved excavation shall include compensation for disposal of surplus material and installation of all necessary sheeting and bracing.

SUMMARY OF WORK

1.0 GENERAL

This section contains a summary of the work to be performed by the Contractor. The work described herein is an overview and details of such shall be contained in other Sections.

- A. Under the price specified to be paid for each item, the Contractor shall furnish all labor, materials, equipment, and plant and perform all operations to complete all operations to complete all work as indicated and specified. All supervision, overhead items, bond and permit costs, protection and precautions and all other costs, incidental to the construction work, complete and as specified, are also included.
- B. A complete, finished, working job, as intended by the general nature of these Specifications, shall be produced whether or not any particular wording or direction is omitted or inadvertently not clearly stated.
- C. Measurement for payment shall be by the Engineer, except where noted elsewhere in this Specification. Measurement for payment for lump sum items shall be on the basis of percentage of work complete and in place.
- D. The prices for those items which involve excavation shall include compensation for transportation and disposal of surplus excavated material and handling water.
- E. Owner reserves the right to delete any item or modify estimated quantities without penalty. Contractor shall make no claim as to lost profits or added costs due to quantity adjustments or deletions.
- F. Unit prices listed shall be the basis of cost adjustment for additional items of work required by a change order.

1.1 DESCRIPTION

In accordance with the bid/contract documents, the Contractor shall perform the task as outlined to produce a final product which is complete and in place and ready for operation. The Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, heat, power, transportation, superintendence, temporary construction of every nature, taxes legally collectible because of the work, and all other services and facilities of every nature whatsoever necessary to perform the work to be done under the contract and deliver it complete in every respect with the specified time.

2.0 MATERIALS

No materials are specified in this Section. Materials shall be specified in these bid/contract documents.

3.0 CONSTRUCTION METHODS

No construction methods are specified in this Section. Construction methods shall be as specified in these bid/contract documents or as approved by the Engineer.

4.0 MEASUREMENT AND PAYMENT

No measurement and payment are specified for Contract items in this Section. Measurement and payment for the work performed under this Contract shall be as specified in these bid/contract documents.

SUBMITTALS

1.0 GENERAL

1.1 DESCRIPTION:

This section specifies the types of submittals required throughout the project. The Contractor shall submit the following information in the manner described herein.

1.2 SHOP DRAWINGS:

Shop Drawings shall be submitted by the Contractor to the Engineer for all products specified within these bid/contract documents and indicated or implied on the drawings. The Shop Drawings shall be submitted at least ten (10) days prior to scheduled use of the product for review by the Engineer.

Each Shop Drawing shall include the specifications of the product, material content, physical and chemical parameters, testing results, dimensions, qualifications, color choices, samples (if specifically required), and drawings (if specifically required).

Exactly four (4) copies of Shop Drawing shall be submitted to the Engineer or designated representative. The submitted Shop Drawings shall be stamped and signed by the Contractor with a statement indicating that the Contractor has reviewed the Shop Drawings and accepted the product. Upon receipt of the Shop Drawings, the Engineer will review the product information to determine acceptability based on the Contract Documents. The Engineer shall return at least two (2) copies of the reviewed Shop Drawings to the Contractor with a memo detailing the Engineer's review. In the case that the Shop Drawing is rejected, the Engineer will return three (3) copies to the Contractor with a reasonable explanation as to why the product was rejected. The following comments shall be used to summarize the Engineer's review:

Approved – the Shop Drawing is accepted as submitted with no exceptions

Approved as Noted – the Shop Drawing is accepted as submitted under the condition that the noted corrections will be made as indicated

Revise and Resubmit – the Shop Drawing is rejected as submitted but may be revised and resubmitted for review

Rejected – the Shop Drawing is rejected as submitted; the product list is not acceptable

The Engineer reserves the right to reject a product which is not in conformance with these bid/contract documents or is not of the required quality to maintain the specified product requirements for a reasonable length of time. Any material or equipment installed before it is approved shall be removed and replaced by the Contractor with material or equipment acceptable to the Engineer at no additional cost to the City.

1.3 PROGRESS REPORTS:

The Contractor shall submit progress reports on a weekly basis to the Engineer. Summarize the events of the previous week, list materials and labor expended, daily

quantities for the week, progress of work, problems encountered, significant site visitors, and predicted construction events for the upcoming week.

1.4 SCHEDULE:

The Contractor shall submit a comprehensive construction schedule to the Engineer for review due upon issuance of the Notice to Proceed at least ten (10) days prior to the start of work. The construction schedule shall demonstrate in detail the means by which the Contractor will perform the work specified herein in the time allotment stated in the Contract. The Contractor shall not begin any work until the Engineer has reviewed and approved the submitted construction schedule.

The construction schedule shall contain all significant tasks with anticipated start date and end date. The schedule shall identify landmark tasks, critical tasks, dependent tasks and duration for each task in days.

The Contractor shall submit an updated schedule each week with the progress report. The updated schedule shall include all information described above. If the contractor fails to provide an updated completion schedule with his progress report no further payments will be made by the City of Marlborough until such time as a revised scheduled and report is submitted and approved by the City Engineer and/or his designee. If the updated schedule indicates that a delay is anticipated in the final end date, the Contractor shall submit to the Engineer a written reason for the delay, possible remedy, and justification for the new end date. The Engineer shall review the statement to determine if the Contractor is responsible for the delay. If the Contractor is found responsible, the Contractor shall be fined in accordance with the General Conditions.

If the Contractor is deemed not responsible, the contract duration will be extended in accordance with the General Conditions.

1.5 CERTIFIED PAYROLLS:

The Contractor shall submit to the City weekly certified payrolls no later than two weeks following the week of work performed. These payrolls shall be certified by the Contractor's payroll clerk. Minority work hours to date shall be provided with the payroll.

2.0 MATERIALS

No materials are specified in this Section.

3.0 CONSTRUCTION METHODS

No construction methods are specified in this Section.

4.0 MEASUREMENT AND PAYMENT

No measurement and payment is specified in this Section.

CONTROL OF WORK

1.0 GENERAL

1.1 DESCRIPTION:

This section specifies the actions which shall be taken to control the work performed under this Contract.

1.2 RELATED SECTIONS

Attention is directed to the General Conditions, Supplemental General Conditions, Specific Conditions, and Contract Drawings.

2.0 MATERIALS

2.1 CALCIUM CHLORIDE:

Calcium chloride shall be used to control dust as necessary or as required by the Engineer. The chemical shall be pure and free from deleterious materials and contamination. The calcium chloride may be in liquid or flake form.

2.2 CLEANING MATERIALS:

Only cleaning materials recommended by manufacturer of surface to be cleaned shall be used.

Cleaning materials shall be used only on surfaces recommended by cleaning material manufacturer.

3.0 CONSTRUCTION METHODS

3.1 CONTROL:

The Contractor shall give his personal attention constantly to the faithful prosecution of the work and shall keep the same under his personal control. He shall not assign by power of attorney or otherwise, or sublet the work or any part thereof without the written consent of the Contracting Officer. The Contractor shall designate a Project Manager for the project. The Project Manager shall be at the site at all times when construction is taking place including work by subcontractors.

3.2 ADVERTISEMENTS:

No advertisements or company signs shall be displayed within the area of the work.

3.3 DUST CONTROL:

A systematic method of Dust Control shall be maintained by the Contractor, using water and/or calcium chloride as directed by the Engineer, in accordance with Section 440 of the 1988 edition (or latest revision) of the Commonwealth of Massachusetts Department of Public Works Standard Specification for Highways and Bridges, as amended or as otherwise approved by the Engineer.

3.4 TRAFFIC CONTROL:

Traffic control, traffic patterns and/or traffic flow will be governed by the City Engineer. Consideration will be given to all parties in making final determinations.

All temporary barriers, traffic control signs and warning beacons will be provided and maintained by the Contractor, and will be paid under the appropriate line item. The number of barriers, signs, variable message boards and beacons and their respective location will be determined by the City Engineer.

Emergency vehicles, school buses and residents adjacent to the work area shall be guaranteed access through the work area at all times, unless otherwise directed by the Engineer. No additional compensation will be allowed for maintaining said access.

The safe passage of pedestrian and vehicular traffic around the perimeter of the construction/ work area, within reasonable limits, shall be guaranteed at all times by the Contractor. Temporary pedestrian walkways may be required by the Engineer at no additional compensation to the Contractor.

3.5 POLLUTION CONTROL:

The Contractor shall maintain a clean and pollution free site at all times and under all conditions. Waste generated shall be contained on the site and removed on a daily basis. Storage of contaminated materials which have been found at the site and which could potentially contaminate soil and/or groundwater shall not be stored directly on the ground surface but shall be completely contained to the satisfaction of the Engineer. Such materials shall not remain on the site for extended periods of time.

Runoff from the construction site shall be controlled so as not to contaminate groundwater, surface water, soils or other environmental features.

All equipment used for construction, stored at the site, or on the site for any reason shall be free from leaks of oil or hazardous materials and shall not generate excessive exhaust or smoke to pollute the air.

The noise generated by the construction operations at the site shall not be in excess of what is necessary to complete the work described herein. Excess noise due to faulty equipment will not be permitted.

3.6 SAFETY:

It is the responsibility of the Contractor to maintain the project in accordance with the following safety standard: Industrial Bulletin No. 12. Rules and Regulations for the Prevention of Accidents in Construction Operations (effective April 19, 1967 or latest) as published by the Massachusetts Department of Labor and Industries, Division of Industrial Safety.

All volatile waste shall be stored in covered metal containers approved by the Fire Department and shall be removed from the premises daily.

3.7 LIMITS OF WORK:

The Contractor shall keep all work within the limits of work as identified on the drawings and specified herein unless otherwise directed and approved by the City Engineer. Work outside the limits shall be controlled in accordance with this section and shall be restored to the conditions found prior to its disturbance.

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT:

No measurement or payment shall be made for safety, traffic control, pollution control, or limits of work, which are all considered part of the Contractor’s responsibility.

Measurement for dust control shall be made based upon the pounds of calcium chloride placed.

Silt sacks shall be measured on a per catch basin basis. No measurement shall be made for replacement of silt sacks.

4.3 PAYMENT:

Calcium Chloride for dust control shall be paid for at the contract unit price for Item 440. – Calcium Chloride for Roadway Dust Control.

Silt sacks for catch basin protection shall be paid for at the contract unit price for Item 697.1 – Silt Sack. No additional payment will be made for cleaning and replacing silt sacks.

4.3 PAYMENT ITEMS:

<u>Item#</u>	<u>tem</u>	<u>Unit</u>
440	Calcium Chloride	LB
697.1	Silt Sack	EA

MEETINGS

1.0 GENERAL

1.1 DESCRIPTION:

This section specifies the Contractor's responsibility with respect to kick-off meetings, construction progress meetings, close out meetings and other meetings related to the work contained in this Contract.

1.2 PRE-CONSTRUCTION MEETING:

The Contractor and all Subcontractors to perform work under this Contract shall attend a pre-construction meeting with the City, Engineer, and/or Designer. The meeting shall include a site visit and shall address start dates of construction, schedule, acceptable layout areas, and all issues regarding construction.

The pre-construction meeting shall be held no less than one week prior to start of any construction, delivery or storage of materials or equipment, or any work on the site.

1.3 PROGRESS MEETINGS:

During construction, progress meetings will be held weekly. The Contractor or his representative shall attend each progress meeting. The weekly progress report and schedule update shall be delivered to the City at least twenty-four (24) hours prior to each scheduled progress meeting. The purpose of the meetings is to review progress, address the concerns of the City, Design, and Contractor, and to review the schedule and related issues.

The weekly progress meeting shall be held at the site or at the City of Marlborough DPW at 135 Neil Street.

1.4 PROJECT CLOSE OUT MEETING:

At the end of construction and prior to the final payment to the Contractor, a project close out meeting shall be held. The Contractor shall attend this meeting. The purpose of the meeting is to review the finished work with respect to the Contract, develop a punch list of outstanding work to be performed, address problems and concerns with the quality or completeness of work, and review original schedule and final end date.

2.0 MATERIALS

No materials are specified in this section.

3.0 CONSTRUCTION METHODS

No construction methods are specified in this section.

4.0 MEASUREMENT AND PAYMENT

No measurement and payment specified in this section.

TEMPORARY FACILITIES

1.0 GENERAL

1.1 DESCRIPTION:

The work to be performed in this Section consists of providing temporary facilities for the duration of the construction period including the periods of site preparation and clean up operations. Temporary facilities include field offices, temporary utilities, sanitary facilities, and water for construction, storage areas, and temporary drainage.

1.2 FIELD OFFICE:

The Contractor may, at his discretion, provide and maintain a field office, with telephone, at the job site. Field and/or temporary offices shall be removed when no longer contributory to the project. The Contractor shall pay for all costs in connection with the construction, servicing, maintenance and removal of temporary offices. City facilities, including telephone, will not be available for use by the Contractor.

Construction shanties, sheds and temporary facilities provided for above, or for the Contractor's convenience, shall be located and constructed as approved by the City Engineer and the Building Commissioner and shall be maintained in good condition and neat appearance, including painting with two coats of approved paint of a color as selected and approved by the City Engineer.

1.3 TEMPORARY DRAINAGE:

The Contractor shall maintain open channels for the proper disposal of surface runoff. Sediment collecting in existing or new drainage structures shall be removed. No abutting property shall be adversely affected by the Contractor's inability to control the methods and procedures of construction.

1.4 WATER FOR CONSTRUCTION:

Water for construction shall be provided and metered by the City of Marlborough. However, the Contractor through means of water pumper truck or other equipment as needed (at the expense of the Contractor) shall apply and/or spread the water as directed by the City Engineer for dust control.

Any use of hydrants for water is expressly prohibited without a prior written request by the Contractor and written approval by the City Engineer. Use of temporary bypass water mains, hydrants, and services for construction water is prohibited. Any hydrants approved for use by the Contractor shall be opened and closed by the DPW on a daily basis.

1.5 MATERIALS STORAGE:

Material storage in the work area will be limited, at best, and will be under constant review by the City Engineer. Materials stored on site shall be the sole responsibility of the Contractor of record and will not be monitored by any agency of the City and its employees.

Temporary storage areas shall be cleaned and restored to original conditions upon completion of the work.

1.6 SANITARY FACILITIES:

The Contractor shall provide and maintain in a sanitary condition, enclosed, weather-tight, chemical toilets for the use of all construction personnel at a location within the contract limit lines. Installation of toilets shall be in accordance with all applicable codes and regulations of the authorities having jurisdiction. The number of facilities required shall be in accordance with State and local applicable codes.

2.0 MATERIALS

No materials are specified in this section.

3.0 CONSTRUCTION METHODS

No construction methods are specified in this section.

4.0 MEASUREMENT AND PAYMENT

No measurement and payment are specified in this section.

SAFETY

1.0 GENERAL

1.1 DESCRIPTION OF WORK:

Safety signing for Construction Operations shall include furnishing, positioning, repositioning, maintaining, and removing as needed and/or as directed: regulatory, warning, and guide signs together with their supports.

Reflectorized drums with warning lights shall be furnished, positioned, repositioned, maintained, and removed as needed and/or directed.

Payment for police details shall also be included as part of this section.

RELATED SECTIONS:

Attention is directed to the General Conditions, Supplemental General Conditions, Specific Conditions, and Contract Drawings. Other related sections include:

Section 0010 – Control of Work

2.0 MATERIALS

2.1 SIGNS:

Materials shall conform to Massachusetts Department of Public Works, Standard Specifications for Highways and Bridges, 1988, (or latest revision) Section 828 and 840 and shall be in conformance with the Manual on Uniform Traffic Control Devices, latest edition. The entire area of the signs shall be reflectorized with reflective sheeting consisting of spherical lens elements embedded with a transparent plastic having a smooth, flat outer surface. The sheeting shall be weather resistant, having a protected pre-coated adhesive backing conforming to the applicable requirements of Federal Specification L-S-300A (current issue).

It is recognized that technological progress may develop new and satisfactory materials and nothing in this specification shall be interpreted to exclude new materials that are acceptable to the Engineer.

2.2 REFLECTORIZED DRUMS:

Non-metallic reflectorized drums shall conform to Massachusetts Department of Public Works, Standard Specifications for Highways and Bridges, 1988, (or latest revision) Subsection M9.30.0. Newly developed products providing equivalent target value and stability that are acceptable to the Engineer may be used under this item.

All drums shall be equipped with functioning warning lights and shall conform to the MUTCD Subsection 6D-5 for Type A or Type C.

3.0 CONSTRUCTION METHODS

3.1 PERSONAL PROTECTION:

The Contractor, in general, is solely responsible for safety on the job site. The Contractor is required to comply with all OSHA health and safety regulations regarding personal protection of employees. Hard hats shall be worn at all times during construction operations. Additional personal protection equipment shall be donned as required according to the Contractor's approved Health and Safety Plan for this project.

3.2 SAFETY SIGNING:

The Contractor shall submit sign placement and sign size sketches showing the proposed sign setups to be used to provide the necessary traffic control and protection during the progress of the work. Signs not in effect shall be covered by the Contractor.

Signs which are damaged or are missing from their location shall be replaced by the Contractor without additional compensation.

All signs shall be maintained in a manner satisfactory to the Engineer, including the removal of dirt or road film that causes a reduction in sign reflective efficiency.

3.3 REFLECTORIZED DRUMS

All drums shall be maintained in a manner satisfactory to the Engineer, including the removal of dirt or road film that causes a reduction in sign reflective efficiency. Any drum which is equipped with a non-functioning warning/flashing light shall be replaced as soon as possible. The number and placement of drums shall be determined by the Engineer and the Safety Officer.

3.4 POLICE DETAILS

The Contractor shall use police details for traffic control as directed by the Chief of Police or the Engineer. The Contractor shall schedule all details directly through the Police Department. A minimum of two hours notice is required for any detail cancellations. The City shall not reimburse the Contractor for any charges incurred as a result of the Contractor's failure to provide sufficient notice.

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT:

Measurement of Safety Controls for Construction Operations shall be made as a lump sum. The use of Reflectorized Drums shall be paid for as part of Safety Controls for Construction Operations.

Measurement of safety signage shall be based on the square footage in place, as determined by the Engineer or his designee.

No measurement or payment shall be made for personal protection equipment. These items are considered the Contractor’s responsibility.

Measurement for police details shall be based on the number of hours worked by the detail officer.

Measurement for Safety Controls shall be based on lump sum for the entire project that includes all reflectorized drums, temporary traffic management signage and traffic cones.

4.2 PAYMENT

The contractor will be paid for Safety Controls for Construction Operations in equal amounts on each estimate based on the number of months estimated to complete the work.

Payment for Reflectorized drums shall be at the contract unit price Safety Controls for Construction Operations Lump Sum.

Payment for safety signage shall be based on the contract unit price per square footage of signage as described in Part 4.1 of this specification. The contract unit price per square foot shall include all hardware necessary for placement, including but not limited to fasteners and posts.

The Contractor shall be responsible for paying the detail officers for time worked. The City will reimburse, from the Police Detail line item, the Contractor for those costs upon submission by the Contractor of evidence that the detail officers were paid. There shall be no mark-up allowed for Contractor overhead, profit, or other cost. The Contractor shall only be reimbursed the actual invoiced cost of the detail officer.

4.3 PAYMENTS ITEMS:

<u>Item #</u>	<u>Item</u>	<u>Unit</u>
851	Safety Controls for Construction Operations	LS
852	Safety Signage for Construction Operations	SF
999.1	Police Details	ALL

SECTION 200
SANITARY SEWER AND APPURTENANCES

<u>Item 247.081</u>	<u>8x8x6 P.V.C. “Y”</u>
<u>Item 250.06</u>	<u>6 In. P.V.C. Sanitary Sewer</u>
<u>Item 250.08</u>	<u>8 In. P.V.C Sanitary Sewer</u>

1.0 GENERAL

1.1 DESCRIPTION OF WORK:

The work described herein consists of furnishing all labor, equipment, materials, bedding, bedding material, excavation, backfilling, compaction, dewatering and other incidental items to completely install and test sewer main, fittings and associated appurtenances as indicated on the Drawings and as described herein. The work shall also include by-pass pumping and/or trucking during the construction phase. The contractor’s personnel shall be responsible for monitoring continuously and be prepared at all times during the bypass and/or trucking operations, to assure the pumping station the ability to operate at design capacity. The owner’s personnel shall not be responsible for operation of the bypass and/or trucking. The unit price shall include full compensation for the bypass and/or trucking operation, handling flows, installing 8-inch, 6-inch and fittings as well as making all connections. Any manhole(s) cored in the field are to be done at no additional compensation to the owner. Pressure testing shall be required upon completion of the P.V.C mains, including leakage tests, placing of green metallic warning tape and oak markers all in accordance with the City of Marlborough’s Department of Public Works Sewer Use Regulations and as shown on the plans. Compensation for all required testing shall be included in the contract unit price for the items to be tested and/or those items which may affect the testing of existing utilities.

1.2 RELATED SECTIONS:

Attention is directed to the General Conditions and Special Conditions contained within these specifications

1.3 REFERENCE STANDARDS:

All products, materials and procedures shall conform to the following standards in their most current edition.

1.4 SUBMITTALS:

Submit shop Drawings and product data in accordance with “Submittals” section of the specifications.

2.0 MATERIALS

2.1 GENERAL:

All products included in this section shall conform to the requirements of the standard specifications referenced herein.

Pipe size shall be as shown on the Drawings.

All pipe materials and methods of jointing shall be as shown on the Drawings.

All pipe and fittings shall be inspected and tested at the foundry as required by the standard specifications to which the material is manufactured. The Contractor shall furnish in duplicate to the Engineer sworn certificates of such tests.

In addition, the Owner reserves the right to have any or all pipe, fittings and special casting inspected and/or tested by an independent service at either the manufacturer's plant or elsewhere. Such inspection and/or tests shall be at the Owner's expense.

Pipe and fittings shall be subjected to a careful inspection and a hammer test just before being laid or installed.

3.0 CONSTRUCTION METHODS

3.1 GENERAL:

Pipe and accessories shall be handled and stored in such a manner as to insure that pipe is installed in sound, undamaged condition. Particular care shall be taken not to injure the pipe coating or lining. All pipes shall be thoroughly cleaned before being laid.

Every care shall be taken in handling and laying pipe and fittings to avoid damaging the pipe or lining, scratching or marring machined surfaces, and abrasion of the pipe coating or lining.

Any pipe showing a distinct crack with no evidence of incipient fracture beyond the limits of the visible crack, if approved, may have the cracked portion cut off by, and at the expense of, the Contractor before the pipe is laid so that the pipe used is perfectly sound. The cut shall be made in the sound barrel at a point at least 12-inches from the visible limits of the crack.

If authorized, cutting of the pipe shall be done so that the cut is square and clean, without causing damage to the pipe lining. Unless otherwise authorized by the Engineer, all pipe cutting shall be done by means of an approved type of power cutter. The use of hammer and chisel, or any other method, which results in rough edges, chips and damaged pipe, is prohibited. All cut edges shall be field beveled by use of a power grinder, as required, prior to installation.

Each pipe section shall be placed into position in the trench in such manner and by such means required to cause no damage to the pipe, person or to property.

The Contractor shall furnish slings, straps, and/or approved devices to provide satisfactory support of the pipe when it is lifted. Transportation from delivery areas to the trench shall be restricted to operations which can cause no damage to the pipe units.

Pipe shall not be dropped from trucks onto the ground or into the trench. The Contractor shall have on the job site, with each laying crew, all the proper tools to handle and cut the pipe.

Damaged pipe coating and/or lining shall be restored before installation only as approved or directed by the Engineer.

All testing the sewer main shall be performed by a third party independent testing company approved by the City Engineer. In no case shall the contractor perform the testing work.

3.2 CONTROL OF ALIGNMENT AND GRADE:

The Engineer has shown easement and property and other control lines necessary for locating the work as well as elevations and benchmarks used in the design of the work on the Drawings.

The Contractor shall use this information to set line and use a surveyor's level or transit to set grade as required.

The use of string levels, hand levels, carpenter's levels or other curved devices for transferring grade or setting pipe are not permitted.

During construction, the Contractor shall provide the Engineer, at his request, all reasonable and necessary materials, opportunities, assistance for setting stakes and making measurements, and chain men, as needed, at intermittent times. He shall not proceed until he has made timely request of the Engineer for, and has received from him, such controls and instructions as may be necessary for the work to progress. The work shall then be done in strict conformity with such controls and instructions.

The Contractor shall carefully preserve benchmarks, reference points and stakes, and in case of willful or careless destruction by his own employees, he will be charged with the resulting expense and shall be responsible for any mistakes or delay that may be caused by their unnecessary loss or disturbance.

3.3 PREPARATION OF BED:

As soon as excavation has been completed to required depth, the Contractor shall place and compact bedding material to the elevation necessary to bring the pipe to grade as specified herein.

The compacted bed shall be rounded so that at least the bottom quadrant of the pipe shall rest firmly for the full length of the barrel.

Suitable holes for bells or couplings shall be dug around the pipe joints to provide ample space for making tight joints.

The trench bottom shall be straight, free of bumps or hollows and at the proper depth. Any irregularities in the trench bottom shall be leveled off or filled in with a selected gravel or sand thoroughly tamped. Where ledge or rock excavation is required, the trench shall be backfilled with sand. The bedding/bedding material shall then be installed in accordance to the City of Marlborough Sewer Regulations.

The pipe shall then be laid on the trench bedding, and the pipe pushed home by approved methods such as with a bar and block. Jointing shall be in accordance with the manufacturer's instructions and appropriate ASTM Standards, and the Contractor shall

have on hand for each pipe laying crew, the necessary tools, gauges, pipe cutters, etc. necessary to install the pipe in a workmanlike manner.

Blocking under the pipe will not be permitted except where a concrete cradle is proposed, in which case precast concrete blocks shall be used.

If inspection of the pipe indicates that the pipe has been properly installed as determined by the Engineer, the Contractor may then refill or backfill the remainder of the trench in accordance with the Specifications.

At any time that work is not in progress, the end of the pipe shall have a temporary, water tight plug to prevent the entry of animals, earth, water, and debris.

Acceptable alignment shall be preserved in laying. The deflection at joints shall not exceed three degrees, or twelve inches for an 18-foot length of pipe. Fittings, in addition to those shown on the Drawings, shall be provided, if required, in crossing utilities which may be encountered upon opening the trench. Solid sleeves shall be used only where approved by the Engineer.

Push-on joints shall be made in strict accordance with the manufacturer's instructions. A rubber gasket shall be inserted in the groove of the bell end of the pipe and joint surfaces cleaned and lubricated. The plain end of the pipe to be entered shall then be inserted in alignment with the bell of the pipe to which it is to be jointed and pushed home with a jack or by other means. After jointing the pipe, a metal feeler shall be used to make certain that the rubber gasket is located correctly. Bell or coupling holes shall be excavated as necessary to ensure that the pipes and not the pipe bells or couplings are bearing the weight of the backfill and traffic load.

3.4 TESTING:

The Contractor shall hire an independent testing firm that specializes in sewer collection system testing. The testing firm shall furnish all labor, pumps, taps, chemicals, and other necessary equipment to conduct hydrostatic pressure tests, on the mains laid under this contract.

The tests shall be conducted at a time specified by and under the supervision and success or failure of the work to meet the required standards.

In the event that the work fails to meet the required standards as stated herein, the Contractor shall perform such excavation, repair, re-laying of pipe, and all other work necessary to correct the work; and shall repeat the tests as often as may be necessary and until such time as the required standards are met.

3.5 PRESSURE TESTS:

Before applying the specified test pressure, all air shall be expelled from the pipe. If suitable means of expelling air are not available at high places, the Contractor shall make all the necessary taps as shown on plans or as the Engineer may direct. After the tests have been completed, the corporation stops shall be removed and plugs inserted, as directed by the Engineer or Owner.

The newly laid pipe shall be tested in valved or plugged sections as determined by the Engineer in the field. Water shall be slowly introduced into the section being tested by means of an approved power-driven high-pressure test pump.

The newly laid pipeline shall be tested to a pressure of 100-psi static pressure for the section being tested, measured at the lowest point of the section being tested, corrected to the elevation of the test gauge. If the static pressure of any newly laid section of pipeline being tested is less than 100 psig measured at the lowest point of the pipeline section.

The pressure shall be raised to the test pressure required for each section being tested as determined by the Engineer. When the test pressure is reached, the time shall be recorded and the test shall begin. The duration of each pressure test shall be a minimum of two hours. During the test, pressure shall be maintained in the section of pipeline being tested by means of a re-circulating, by-pass type test pump. Water shall be added in measured amounts from a container of known volume if required to maintain pressure. The addition of excessive amount of water shall constitute immediate test failure. The Engineer will approve all gauges and test equipment.

During the test, the line will be examined by the Engineer for visible leaks and breaks. Any defects in the works shall be repaired, and any defective materials shall be removed and replaced by the Contractor as and where directed by the Engineer.

3.6 LEAKAGE TEST:

The leakage test shall be conducted concurrently with the pressure test. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof, to maintain pressure within five psi of the specified test pressure after the air in the pipeline has been expelled and the pipe has been filled with water. Leakage shall not be measured by a drop in pressure in a test section over a period of time.

No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$L = \frac{SD}{133,200} / P$$

which L is the allowable leakage, in gallons per hour; S is the length of pipe tested, in feet; D is the nominal diameter of the pipe, in inches; and P is the average test pressure during the leakage test, in pounds per square inch gauge.

When testing against closed metal-seated valves, an additional leakage per closed valve of 0.0078 gal/h/in. of nominal valve size shall be allowed.

Acceptance shall be determined on the basis of allowable leakage. If any test of pipe laid discloses leakage greater than that specified, the Contractor shall, at his own expense, locate and make repairs as necessary until the leakage is within the specified allowance, as determined by additional testing.

All visible leaks are to be repaired regardless of the amount of leakage. At the end of the test period, if the amount of water added to the main from the

calibrated vessel is less than the allowable leakage, and if the line shows no visible leaks or other failures, that portion of the main tested will be approved by the Engineer.

3.14 CONNECTION TO EXISTING SYSTEM:

The Contractor shall furnish all necessary labor, tools, joint materials, equipment, etc. to connect new sewer pipes to existing sewer pipes with the required proper fittings. Flexible transition couplings used to connect new sewer pipes to existing sewer pipes shall be as specified.

All materials, equipment and labor necessary for the connection of the new mains to the existing mains shall be accomplished as shown on the Drawings or as directed by the Engineer and shall be considered subsidiary to the pipe laying items.

3.15 BACKFILLING

The excavated trench is to be backfilled as directed by the Engineer. In all cases, the backfilled material shall be compacted in lifts not exceeding six (6) inches in depth (loose measurement).

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT:

Sewer main and sewer services shall be measured horizontally along the centerline of the pipe as laid including valves and fittings. The sewer main shall be measured per linear foot to the nearest 0.5 of a foot.

Sewer “Y”'s shall be measured by each installed.

4.2 PAYMENT:

Payment shall be made at the Contract Unit Price per linear foot for 6 & 8-inch P.V.C. Sanitary Sewer. The unit price shall include compensation for furnishing and installing the sewer main and fittings including, bends, coring into existing manhole, rubber boot at cored location, re shaping the table at the existing manhole in order to accommodate new invert, jointing, bedding, bedding material, 3/4” crushed stone, excavation support, bypass pumping and/or trucking during the construction phase (if necessary), removal and disposal of existing sewer main and services (if necessary), backfilling, compaction, testing and restoring trench to subgrade.

4.3 PAYMENT ITEMS:

<u>ITEM #</u>	<u>ITEM</u>	<u>UNIT</u>
247.081	8x8x6 P.V.C. “Y”	EA
250.06	6 In. P.V.C. Sanitary Sewer	LF
250.08	8 In. P.V.C Sanitary Sewer	LF

**SECTION 230
CULVERTS, STROM DRAINS AND SEWER PIPES**

1.0 GENERAL

1.1 DESCRIPTION OF WORK:

This work shall consist of the construction of culvert storm drains, sewer pipes, hereinafter referred to as "Pipe", and flared end sections for Reinforced Concrete, P.V.C., Slot Perforated Corrugated Plastic Pipe, in accordance with these specifications and in close conformity with the lines and grades shown on the plans or established by the Engineer.

2.0 MATERIALS

Materials shall meet the requirements specified in the following Subsections of Division III, Materials - Massachusetts Highway Department, Standard Specifications for Highway and Bridges:

Reinforced Concrete Pipe	M5.02.1
Ductile Iron Pipe	M5.05.3
Mortar for Pipe Joint	M4.02.15
Reinforced Concrete Pipe, Flared Ends	M5.02.2
P.V.C. Pipe	M5.03.7
Slot Perforated Corrugated Plastic Pipe (Subdrain)	M5.03.9
Crushed Stone	M2.01.5
Geotextile Fabric for Subsurface Drainage	M9.50.0

3.0 CONSTRUCTION METHODS

3.1 GENERAL:

Excavation for Pipe shall be done in accordance with Section 140 – Excavation for Structures.

The bedding for the Pipe shall be shaped to conform reasonably close to the lower 10% of the pipe and recesses excavated for bells of bell and spigot pipes. All pipe shall be laid to the specified line and grade, with a firm bearing throughout each length and with bell ends uphill.

Drainage pipe shall be backfilled with gravel having no stone greater than 3 inches. Sewer pipe shall be enveloped with 12 inches of ¾" crushed stone and backfilled with gravel having no stone greater than 3 inches.

The joint of reinforced concrete pipe shall thoroughly cleaned and wetted with water before being joined. Reinforced concrete pipe shall be joined using a flexible water tight rubber gasket conforming to ASTM C443 and the filling the joint be completed with cement mortar. The invert shall be kept smooth and free of obstructions.

The drain trench shall be excavated to the depth designated on the plans or, if directed, to a stratum of impervious material.

Where no structure is placed at the ends of the subdrain pipe, the trench shall be excavated a distance of three feet beyond the end of the pipe.

The excavation shall proceed in advance of the actual drain construction only to the extent the Engineer direct. The width of the trench shall be 2 feet.

Where rock is encountered in the excavation, no part of any rock remaining in the trench shall come within six inches of any portion of the pipe.

Joints shall be grouted or sealed unless otherwise specified on the plans or in the special Provisions.

The pipe shall be laid on a six inch bed of crushed stone and the space about, and in the three feet beyond the ends of the pipes shall be filled with ½ inch or ¾ inch crushed stone.

The Contractor shall be responsible for keeping the backfill material clean and free of objectionable material from a line one inch below the flow line of the pipe to the top of the trench.

Inlets and open outlets of subdrains shall be covered with #23 gauge galvanized wire screen of ¼ inch mesh satisfactory fastened to the pipe.

Existing drainage infrastructure is to be field cored with the proper equipment approved and satisfactory to the Engineer.

Removal of existing drain pipe, sewer pipe and water pipe within the trenching area of proposed pipe shall be included in contract unit price per linear foot of kind of pipe at no additional compensation to the Contractor.

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT:

Pipes shall be measured in place and the quantity to be paid for shall be the length actually constructed as directed within the limits specified below.

For measurement purposes the end of the pipe in closed structures shall be considered at the inside face of the wall and at masonry headwalls it shall be considered to be the face of the headwall.

Subdrain pipe shall be measured in place and the quantity to be paid for shall be the length of pipe actually constructed, plus an allowance of three (3) feet for open ends. Rock excavation will be paid under Item 144. Class B Rock Excavation.

Trench Excavation in excess of 5 feet and rock excavation shall be measured as specified in Section 140 – Excavation for Structures.

4.2 PAYMENT:

Pipe culverts, pipe drains and pipe sewers shall be paid for at the contract unit price per linear foot of the kind of pipe required, installed and complete in place.

Excavation and removal of existing drain pipe, water pipe and sewer pipe for the purpose of installation of proposed pipe shall be included in the contract unit price per foot of the kind of pipe required, installed and complete in place.

Trench Excavation for pipe culverts, pipe drains and sewer pipes greater than a depth of 5 feet and rock excavation shall be paid for as specified in Section 140 – Excavation for Structures for Class B Trench Excavation and Class B Rock Excavation. No payment for trench excavation for pipes will be within 1 foot outside the base section of catch basins or manholes.

Backfill for trenches 5 feet or less in depth for pipe culverts, pipe drains and pipe sewers shall be included in the various items for pipe. Backfill for that part of a trench which is more than 5 feet in depth shall be included in the item for Class B Trench Excavation. If the material for backfill is obtained from borrow it shall be paid for at the contract unit price per cubic yard of the kind of borrow required.

Gravel Borrow shall be paid for in accordance with Section 150 – Embankment.

Payment for work under subdrain item will be made at the contract unit price per linear foot, which price shall include all labor, materials, equipment, excavation, pipe, cleanouts, filter fabric, crushed stone, end caps, coring for connection to existing drainage structures and installation in place and satisfactory to the Engineer.

4.3 PAYMENT ITEMS:

<u>ITEM #</u>	<u>ITEM</u>	<u>UNIT</u>
241.12	12" Reinforced Concrete Pipe	L.F.
265.06	6 Pipe Subdrain-Option	L.F.

SECTION 300 WATER MAINS AND APPURTENANCES

Item 302.04 4 In. Ductile Iron Water Main Pipe (Rubber Gasket, Cement Lined)
Item 302.06 6 In. Ductile Iron Water Main Pipe (Rubber Gasket, Cement Lined)

1.0 GENERAL

1.1 DESCRIPTION OF WORK:

The work described herein consists of furnishing all labor, equipment, materials, and other incidental items to completely install, dewater, disinfect and test water mains, fittings and associated appurtenances as indicated on the Drawings and as described herein.

1.2 RELATED SECTIONS:

Attention is directed to the General Conditions, Supplement General Conditions, and Special Conditions contained within these specifications

1.3 REFERENCE STANDARDS:

All products, materials and procedures shall conform to the following standards in their most current edition.

ANSI A21.4/AWWA C104 - Cement Mortar Lining for Ductile Iron and Gray Iron Pipe and Fittings for Water.

ANSI A21.10/AWWA C110 - Gray Iron and Ductile Iron Fittings, 3-inch through 48-inch, for Water and Other Liquids.

ANSI A21.11/AWWA C111 - Rubber Gasket Joints for Ductile Iron and Gray Iron Pressure Pipe and Fittings.

ANSI A21.51/AWWA C151 - Ductile Iron Pipe.

ASTM A126 - Gray Iron Castings for Valves, Flanges and Pipe Fittings.

ASTM B62 - Composition Bronze or Ounce Metal Castings.

AWWA C502 - Dry Barrel Fire Hydrants.

ANSI/AWWA C651 - Disinfecting Water Main.

AWWA B300 - Hypo chlorites.

AWWA C150 - Thickness Design for Ductile Iron Pipe.

ANSI/NSF Standard 61 - Seal Coat for Ductile Iron Pipe.

1.4 SUBMITTALS:

Submit shop Drawings and product data in accordance with “Submittals” section of the specifications.

2.0 MATERIALS

2.1 GENERAL:

All products included in this section shall conform to the requirements of the standard specifications referenced herein.

Pipe size shall be as shown on the Drawings.

All pipe materials and methods of jointing shall be as shown on the Drawings.

All pipe and fittings shall be inspected and tested at the foundry as required by the standard specifications to which the material is manufactured. The Contractor shall furnish in duplicate to the Engineer sworn certificates of such tests.

In addition, the Owner reserves the right to have any or all pipe, fittings and special casting inspected and/or tested by an independent service at either the manufacturer’s plant or elsewhere. Such inspection and/or tests shall be at the Owner’s expense.

Pipe and fittings shall be subjected to a careful inspection and a hammer test just before being laid or installed.

2.2 DUCTILE IRON PIPE:

Ductile Iron Pipe: Pipe shall be designed in accordance with AWWA C150 and shall conform to ANSI A21.51/AWWA C151, Class 52 and shall have push-on joints except that pipe installed in vaults or above grade shall have flanged ends conforming to ANSI B16.1. Pipe shall be double cement-lined with seal coat inside and out, conforming to ANSI A21.4/AWWA C104. Field application is strictly prohibited. The exterior of buried ductile iron pipe shall be bituminous coated. Push-on joints and rubber gaskets shall be in accordance with ANSI A21.11/AWWA C111.

The pipe manufacturer shall supply the Engineer with certificates of compliance with these specifications and certification that each piece of ductile iron pipe has been tested at the foundry with the Ball Impression Test, Ring Bending or other approved test for ductility.

2.3 FITTINGS:

Fittings shall be cast iron, 250 psi pressure rating, or ductile iron, 350 psi pressure rating, conforming to ANSI A21.10/AWWA C110 with mechanical joints. Compact ductile iron fittings conforming to ANSI A21.53/AWWA C153 will be acceptable. Joints and gaskets shall conform to ANSI 21.11/AWWA C111. Joints shall be furnished with ductile iron follower glands. Fittings shall be double cement-lined and seal-coated inside and out in accordance with ANSI A21.4/AWWA C104 and these Specifications. Tees for hydrant branches and for stubs for future use shall have mechanical joints on the run

with a plain end having an integral rotating gland on the branch. The gland will anchor mechanical joint pipe or valve ends to the plain end of the tee.

All ductile and cast iron pipe and fittings shall be clean, sound and without defects. The castings shall be smooth and free from pinholes, excess iron, etc. The coatings shall be continuous, smooth and neither brittle nor sticky. The Contractor will, as ordered by the Engineer, cut lengths of pipe in the middle to check thickness of the lining.

The Contractor shall furnish and install all mechanical joint couplings to be used in connecting two plain ends of cast or ductile iron pipe. The couplings shall be of cast or ductile iron with bolts and nuts complying with AWWA C111. Couplings shall be Dresser Style 38, Smith-Blair Style 441, Clow Type F1208 or approved equal.

2.4 JOINT RETAINER GLANDS:

Mechanical Joint retainer glands shall be ductile iron and shall conform to ASTM A-536. Mechanical joint retainer glands shall be Megalug™, Ford Uni-flange Series 1400, or approved equal. Set screw retainer glands are not acceptable.

2.5 PLUGS AND CAPS:

Plugs and/or caps shall be installed in locations shown on the Drawings or designated by the Engineer. The wetted surfaces of all plugs, caps and blank flanges shall be cement-lined as specified for ductile iron pipe hereinbefore.

Furnish and maintain on the site, temporary water-tight plugs in the various sizes required for the water mains to be installed.

3.0 CONSTRUCTION METHODS

3.1 GENERAL:

All existing water main shall be removed from the site in disposed of in accordance with the contract requirements. At no time shall the pipe be crushed and left in place.

Pipe and accessories shall be handled and stored in such a manner as to insure that pipe is installed in sound, undamaged condition. Particular care shall be taken not to injure the pipe coating or lining. All pipes shall be thoroughly cleaned before being laid.

Ductile iron pipe and fittings and the cement linings are comparatively brittle. Every care shall be taken in handling and laying pipe and fittings to avoid damaging the pipe or lining, scratching or marring machined surfaces, and abrasion of the pipe coating or lining.

Any pipe showing a distinct crack with no evidence of incipient fracture beyond the limits of the visible crack, if approved, may have the cracked portion cut off by, and at the expense of, the Contractor before the pipe is laid so that the pipe used is perfectly sound. The cut shall be made in the sound barrel at a point at least 12-inches from the visible limits of the crack.

If authorized, cutting of the pipe shall be done so that the cut is square and clean, without causing damage to the pipe lining. Unless otherwise authorized by the

Engineer, all pipe cutting shall be done by means of an approved type of power cutter. The use of hammer and chisel, or any other method which results in rough edges, chips and damaged pipe, is prohibited. All cut edges shall be field beveled by use of a power grinder, as required, prior to installation.

Each pipe section shall be placed into position in the trench in such manner and by such means required to cause no damage to the pipe, person or to property.

The Contractor shall furnish slings, straps, and/or approved devices to provide satisfactory support of the pipe when it is lifted. Transportation from delivery areas to the trench shall be restricted to operations which can cause no damage to the pipe units.

Pipe shall not be dropped from trucks onto the ground or into the trench. The Contractor shall have on the job site, with each laying crew, all the proper tools to handle and cut the pipe.

Damaged pipe coating and/or lining shall be restored before installation only as approved or directed by the Engineer.

Ductile Iron Pipes shall be laid in accordance with AWWA C600 and with manufacturer's instructions.

All testing of the water mains (pressure, disinfection) shall be performed by an independent third party company approved by the City Engineer. In no case shall the contractor perform the testing work.

3.2 CONTROL OF ALIGNMENT AND GRADE:

The Engineer has shown easement and property and other control lines necessary for locating the work as well as elevations and benchmarks used in the design of the work on the Drawings.

The Contractor shall use this information to set line and use a surveyor's level or transit to set grade as required.

The use of string levels, hand levels, carpenter's levels or other curved devices for transferring grade or setting pipe are not permitted.

During construction, the Contractor shall provide the Engineer, at his request, all reasonable and necessary materials, opportunities, assistance for setting stakes and making measurements, and chain men, as needed, at intermittent times. He shall not proceed until he has made timely request of the Engineer for, and has received from him, such controls and instructions as may be necessary for the work to progress. The work shall then be done in strict conformity with such controls and instructions.

The Contractor shall carefully preserve benchmarks, reference points and stakes, and in case of willful or careless destruction by his own employees, he will be charged with the resulting expense and shall be responsible for any mistakes or delay that may be caused by their unnecessary loss or disturbance.

3.3 PREPARATION OF BED:

As soon as excavation has been completed to required depth, the Contractor shall place and compact bedding material to the elevation necessary to bring the pipe to grade as specified herein.

The compacted bed shall be rounded so that at least the bottom quadrant of the pipe shall rest firmly for the full length of the barrel.

Suitable holes for bells or couplings shall be dug around the pipe joints to provide ample space for making tight joints.

The trench bottom shall be straight, free of bumps or hollows and at the proper depth. Any irregularities in the trench bottom shall be leveled off or filled in with a selected gravel or sand thoroughly tamped. Where ledge or rock excavation is required, the trench shall be backfilled with sand.

The pipe shall then be laid on the trench bedding, and the pipe pushed home by approved methods such as with a bar and block. Jointing shall be in accordance with the manufacturer's instructions and appropriate ASTM Standards, and the Contractor shall have on hand for each pipe laying crew, the necessary tools, gauges, pipe cutters, etc. necessary to install the pipe in a workmanlike manner. At no time shall the bucket of the excavator be used to push home any pipe.

Blocking under the pipe will not be permitted except where a concrete cradle is proposed, in which case precast concrete blocks shall be used. The placement of metallic warning tape all in accordance with the City of Marlborough's Regulations or as shown on the plans is required.

If inspection of the pipe indicates that the pipe has been properly installed as determined by the Engineer, the Contractor may then refill or backfill the remainder of the trench in accordance with the Specifications.

At any time that work is not in progress, the end of the pipe shall have a temporary, water tight plug to prevent the entry of animals, earth, water, and debris.

Acceptable alignment shall be preserved in laying. The deflection at joints shall not exceed three degrees, or twelve inches for an 18-foot length of pipe. Fittings, in addition to those shown on the Drawings, shall be provided, if required, in crossing utilities which may be encountered upon opening the trench. Solid sleeves shall be used only where approved by the Engineer.

Concrete thrust blocks or other material approved by the Engineer shall be installed at all fittings and other locations as directed by the Engineer. Minimum bearing area shall be as shown on the Drawings. Joints must be protected by felt roofing paper prior to placing concrete. Concrete shall be placed against undisturbed material, and shall not cover joints, bolts or nuts, or interfere with the removal of any joint. Wooden side forms shall be provided for thrust blocks. Concrete shall be produced in accordance with the contract documents.

Push-on joints shall be made in strict accordance with the manufacturer's instructions. A rubber gasket shall be inserted in the groove of the bell end of the pipe and joint surfaces cleaned and lubricated. The plain end of the pipe to be entered shall then be inserted in alignment with the bell of the pipe to which it is to be jointed and pushed home with a jack or by other means. After jointing the pipe, a metal feeler shall be used to make certain that the rubber gasket is located correctly. Bell or coupling holes shall be excavated as necessary to ensure that the pipes and not the pipe bells or couplings are bearing the weight of the backfill and traffic load.

Mechanical joints at valves, fittings and where designated shall be in accordance with the "Notes on Method of Installation" under ANSI Specification A21.11 and the instruction of manufacturer. To assemble the joints in the field, the Contractor shall thoroughly clean the joint surfaces and rubber gasket with soapy water before tightening the bolts. Bolts shall be tight to the specified torque. Under no conditions shall extension wrenches, pipe over handle or ordinary ratchet wrench be used to secure greater leverage.

3.4 TESTING:

The Contractor shall hire an independent testing firm that specializes in water line testing and disinfections of water distribution systems. The testing firm shall furnish all labor, pumps, taps, chemicals, and other necessary equipment to conduct hydrostatic pressure tests, measured leakage test, and laboratory bacteriological analysis on the mains laid under this contract in accordance with Section 4 AWWA C600-82 Installation of Ductile Iron Water Main and Part 3.7 of this Specification Section. The cost associated with the independent testing firm shall be included in the contract unit price for the items to be tested and/or those items, which may effect the testing of existing utilities.

The tests shall be conducted at a time specified by and under the supervision and success or failure of the work to meet the required standards.

In the event that the work fails to meet the required standards as stated herein, the Contractor shall perform such excavation, repair, re-laying of pipe, re-chlorinating, and all other work necessary to correct the work; and shall repeat the tests as often as may be necessary and until such time as the required standards are met.

3.5 PRESSURE TESTS:

Before applying the specified test pressure, all air shall be expelled from the pipe. If suitable means of expelling air are not available at high places, the Contractor shall make all the necessary taps as shown on plans or as the Engineer may direct. After the tests have been completed, the corporation stops shall be left in place or removed and plugs inserted, as directed by the Engineer or Owner.

The newly laid pipe shall be tested in valved or plugged sections as determined by the Engineer in the field. Water shall be slowly introduced into the section being tested by means of an approved power-driven high pressure test pump.

The newly laid pipeline shall be tested to a pressure equal to 150% of the maximum static pressure for the section being tested, measured at the lowest point of the section being tested, corrected to the elevation of the test gauge. If the static pressure of any

newly laid section of pipeline being tested is less than 100 psig measured at the lowest point of the pipeline section, then the minimum test pressure shall be 150 psig.

The pressure shall be raised to the test pressure required for each section being tested as determined by the Engineer. When the test pressure is reached, the time shall be recorded and the test shall begin. The duration of each pressure test shall be a minimum of two hours. During the test, pressure shall be maintained in the section of pipeline being tested by means of a re-circulating, by-pass type test pump. Water shall be added in measured amounts from a container of known volume if required to maintain pressure. The addition of excessive amount of water shall constitute immediate test failure. The Engineer will approve all gauges and test equipment.

During the test, the line will be examined by the Engineer for visible leaks and breaks. Any defects in the works shall be repaired, and any defective materials shall be removed and replaced by the Contractor as and where directed by the Engineer.

3.6 LEAKAGE TEST:

The leakage test shall be conducted concurrently with the pressure test. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof, to maintain pressure within five psi of the specified test pressure after the air in the pipeline has been expelled and the pipe has been filled with water. Leakage shall not be measured by a drop in pressure in a test section over a period of time.

No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$L = \frac{SD}{133,200 P}$$

in which L is the allowable leakage, in gallons per hour; S is the length of pipe tested, in feet; D is the nominal diameter of the pipe, in inches; and P is the average test pressure during the leakage test, in pounds per square inch gauge.

When testing against closed metal-seated valves, an additional leakage per closed valve of 0.0078 gal/h/in. of nominal valve size shall be allowed.

When hydrants are in the test section, the test shall be made against the closed hydrant.

Acceptance shall be determined on the basis of allowable leakage. If any test of pipe laid discloses leakage greater than that specified, the Contractor shall, at his own expense, locate and make repairs as necessary until the leakage is within the specified allowance, as determined by additional testing.

All visible leaks are to be repaired regardless of the amount of leakage. At the end of the test period, if the amount of water added to the main from the calibrated vessel is less than the allowable leakage, and if the line shows no visible leaks or other failures, that portion of the main tested will be approved by the Engineer.

3.7 DISINFECTION:

After satisfactory pressure and leakage tests have been made by a third party independent testing company approved by the Engineer, before placing the newly-laid mains in service, and when directed by the Engineer, the independent testing firm shall clean mains and disinfect by chlorination. Disinfection of water mains shall be in accordance with AWWA C651 and related chemical standards such as ANSI/AWWA B300 - Hypochlorites, or ANSI/AWWA B301 - Liquid Chlorine.

Prior to chlorination, the mains shall be flushed to remove dirt and other foreign substances.

The mains shall be disinfected by the third party independent firm under the supervision of the Engineer. Disinfection shall be achieved using one of the following chlorination chemicals: liquid chlorine, sodium hypochlorite, or calcium hypochlorite appropriately mixed with water to form a solution. The independent testing firm hired by the contractor shall use a manually controlled, vacuum type solution feed chlorinator or electrically powered chemical feed pump suitable for feeding high concentrations of chlorine solutions. The chlorine shall be introduced into the main through a 3/4-inch corporation stop installed approximately one foot up-stream from the valve at the beginning of the job and testing for residual chlorine shall be at a 3/4-inch corporation stop installed approximately one foot from the down-stream valve at the end of the project.

Water from an approved source shall be introduced slowly into the main during the application of chlorine. The rate of chlorine solution flow shall be in proportion to the rate of water entering the pipe such that the chlorine dose entering the mains shall be at least 25 milligrams per Liter (mg/L) measured as free chlorine. The independent firm shall measure the chlorine concentration at regular intervals and as directed by the Engineer to ensure a dosage of greater than 25 mg/L. When the pipe line has been completely filled with treated water, the main shall be sealed off. Treated water shall be retained in the main for a period of at least twenty-four (24) hours. At the end of the retention period, the chlorinated water at the extremities of the pipe and at other representative points shall have a residual of at least ten (10) mg/L free chlorine.

Should the first treatment fail to meet the above requirements, the procedure shall be repeated until tests show that, in the opinion of the Engineer, effective disinfection has been accomplished.

Following acceptance of the disinfection process, the chlorinated water shall be flushed from the newly-laid main into the sewer line (or dechlorinate) until such time as the replacement water throughout its entire length shall be equal in quality to that elsewhere in the system.

After the main has been flushed of chlorinated water a representative water sample shall be by independent third party firm under the supervision of the Engineer. This sample shall be taken to a Massachusetts DEQE certified laboratory for a bacteria analysis. The cost associated with the collection and analysis of the sample(s) shall be paid for by the Contractor. A minimum of one (1) sample shall be taken per 3000 linear feet. When satisfactory bacteriological test results indicating zero coliform and background levels, a second set of samples shall be taken at least 24 hours after the first sample and delivered to a certified laboratory for analysis. If both sets of samples are found to be free of coliform and are of equal or better bacteriologic quality than that of the distribution

system quality, the new mains may be connected to the existing system and placed into service.

Failure of any bacteria analysis shall require the independent third party to re-flush and re-chlorinate the mains until acceptable bacteriological results are obtained.

Special disinfection procedures, such as soaking or swabbing, approved by the Engineer, shall be used in connections to existing mains and where the method outlined above is not practicable.

3.14 CONNECTION TO EXISTING SYSTEM:

The Contractor shall furnish all necessary labor, tools, joint materials, equipment, etc. to connect new water pipes to existing water pipes with the required proper fittings. Flexible transition couplings used to connect new water pipes to existing water pipes shall be as specified.

All connections shall be made at such time and in such manner as to cause as little interruption in water service as possible.

Coordination of all such work shall be made with the Engineer, Owner and Water Department General Foreman who shall be present when the work is done and shall operate all valves. The Contractor shall notify the Engineer, Water Department and Fire Department 24 hours in advance of when he plans to connect into the existing water mains and/or take existing mains out of service.

All materials, equipment and labor necessary for the connection of the new water mains to the existing water mains shall be accomplished as shown on the Drawings or as directed by the Engineer and shall be considered subsidiary to the pipe laying items.

3.15 BACKFILLING:

The excavated trench is to be backfilled as directed by the Engineer. In all cases, the backfilled material shall be compacted in lifts not exceeding six (6) inches in depth (loose measurement).

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT:

Water main shall be measured horizontally along the center line of the pipe as laid including valves and fittings. The water main shall be measured per linear foot to the nearest 0.5 of a foot.

4.2 PAYMENT:

Payment shall be made at the Contract Unit Price per linear foot for Water Main. The unit price shall include compensation for furnishing all labor, equipment, materials, items to completely install the water main and fittings including, but not limited to, retainer glands, elbows, direct wet taps, threaded rods, mega lugs, bends, blue water metallic warning tape, removal and disposal of existing water main, all testing and disinfection, poured in place concrete thrust blocks, jointing and associated appurtenances, bedding,

12" sand envelope, bedding materials, excavation support, dewatering, backfilling, compaction, and restoring trench surface to grade.

4.3 PAYMENT ITEMS:

<u>Item #</u>	<u>Item</u>	<u>Unit</u>
302.04	4" Ductile Iron Water Main (Rubber Gasket, Cement Lined)	LF
302.06	6" Ductile Iron Water Main (Rubber Gasket, Cement Lined)	LF

**SECTION 300
GATE VALVE AND GATE BOX**

Item 350.06 6 In. Gate Valve and Gate Box

1.0 GENERAL

1.1 DESCRIPTION OF WORK:

The work to be performed under this specification section shall include furnishing all equipment, materials, labor and other items necessary to install valves and valve boxes within the water system complete and in place at locations designated on the Contract Drawings.

1.2 RELATED SECTIONS:

Attention is directed to the General Conditions, Supplemental General Conditions, Specific Conditions, and Contract Drawings which are hereby made part of this section. Other related sections include:

- Section 300 - Water Mains and Fittings
- Section 300 - Hydrants
- Section 120 - Excavation
- Section 150 - Backfilling

1.3 REFERENCE STANDARDS:

AWWA C504 - Rubber Seated Butterfly Valves.

AWWA C500 - Gate Valves, 3-inch through 48-inch.

AWWA C509 - Resilient-Seated Gate Valves.

AWWA C550 - Protective Interior Coatings for Valves and Hydrants.

MATERIALS

2.1 BUTTERFLY VALVES:

Butterfly valves shall be bronze-seated manual globe style valve as manufactured by ClaVal Company, or approved equal. The valve shall have a maximum pressure rating of 200 psi. The valve shall be mechanical joint ended and shall open right. Valve interior and exterior shall be epoxy coated.

2.2 AIR RELEASE AND VACUUM VALVES:

Air release valves and air and vacuum valves shall consist of cast iron body, flange and top. Valves shall be supplied with stainless steel floats rated for 1000 psi collapse pressure.

2.3 GATE VALVES AND BOXES:

Gate valves shall meet or exceed the requirements of AWWA C509. Gate valves shall open right and be resilient wedge design. All valves shall be bubble tight at 200 psi working pressure. Gate valves shall be supplied with stainless steel nuts and bolts on stuffing box and bonnet. Valve body and body shall be fusion bonded epoxy coated, inside and out per AWWA C 550. Gate valves shall be manufactured by Mueller (model A 23-60), Waterous (model AFC- 2500), or equal approved by Marlborough Water and Sewer Division.

The Contractor shall install all valves and boxes as specified and in locations shown on Drawings.

The Contractor shall furnish all rods and retainer glands, such as Megalug or approved equal, required to properly anchor valves, fittings and hydrants.

2.4 BOXES:

Valve boxes shall be cast iron, 5 ¼-inch diameter, two piece, sliding type with covers marked "Water". Covers shall provide minimum overlap of six (6) inches. Valve boxes shall be manufactured in the U.S. or Canada, only.

2.5 TAPPING SLEEVE AND VALVE:

When connections to existing water mains are required, a tapping sleeve and valve shall be used. The tapping sleeve and valve shall be of adequate size and pressure to ensure the continued flow of water through the existing main throughout construction. A gate valve and box will be installed with the tapping sleeve. The gate valve shall conform to requirements listed above in Subsection 2.3.

Tapping Sleeve and valve shall be as manufactured by Mueller exclusively.

3.0 CONSTRUCTION METHODS

3.1 INSTALLATION OF VALVES AND FITTINGS:

Gate valves and boxes shall be set with the stem vertical and box vertically centered over operating nut. Valves shall be set on a firm foundation and supported by tamping selected excavated material under and at the sides of the valve. The gate box shall be supported during backfilling and maintained in vertical alignment with the top flush with finish grade.

Valves shall be anchored to all tees or fittings with 3/4" threaded rods and or retainer glands, wherever possible or as directed by the Engineer.

Couplings and fittings shall be installed in accordance with manufacturer's instructions.

3.2 INSTALLATION OF MANUAL AIR RELEASE / CHLORINATION INJECTION POINTS.

Installation of chlorination taps shall be by direct tap, after which corporation shall be removed, the top shall be plugged with a brass plug as directed by City engineers.

The exact location of the manual air releases will be determined in the field.

3.3 TESTING OF VALVES AND HYDRANTS:

All valves and hydrants shall be pressure tested during the main pipeline test. Hydrant gate valves shall remain open during the main pressure test. After the pipeline has been pressure tested and accepted, the hydrant gate valve shall be closed and the hydrant valve cracked open to release some pressure on the hydrant side of the gate valve. An acceptable test for each hydrant gate valve shall be no loss of pressure in the main line test pressure as each valve is closed.

All main line butterfly or gate valves and control valves on any intersecting side streets shall also be tested by the same procedures outlined above as far as practical. The Engineer shall decide if it is impractical to test any one particular valve location. No pressure test shall be considered acceptable until all possible control valves have been tested to insure proper closing and water tightness.

The Contractor shall make any taps and furnish all necessary caps, plugs, etc., as required in conjunction with testing. He shall also furnish a test pump, gauges and any other equipment required in conjunction with carrying on the hydrostatic tests. He shall at all times protect the new water mains and the existing water mains against the entrance of polluting material.

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT:

Valves shall be measured per unit installed, complete and in place, including boxes, if required and all appurtenant work including but not limited to excavating, backfilling, testing, and disinfecting nipples and couplings.

4.2 PAYMENT:

Payment shall be made at the contract unit price per valve for work completed and accepted. The contract unit price shall include, new valves and boxes, threaded rods, retainer glands, nipples, couplings, mega lugs, fittings, support blocks, per these Specifications and Drawings, all hardware, excavation and backfilling, poured in place concrete thrust blocks, testing, cleaning, compaction, brought to finish grade, removal and disposal of existing gates being replaced and other work required to fully and completely install valves in place.

4.3 PAYMENT ITEMS:

<u>Item#</u>	<u>Item</u>	<u>UNIT</u>
350.06	6 in. Gate Valve and Gate Box	EA

SECTION 300 HYDRANTS

Item 376 Hydrant

Item 376.1 Hydrant Removed and Stacked

1.0 GENERAL

1.1 DESCRIPTION OF WORK:

The work to be performed under this section includes furnishing all materials, labor, and equipment to install hydrants complete and in place at locations indicated on the Contract Drawings.

1.2 RELATED SECTIONS:

Attention is directed to the General Conditions, Supplemental General Conditions, and Specific Conditions which are hereby made a part of this section and the Contract Drawings. Other related sections include:

Section 300 - Water Mains and Fittings
Section 300 - Valves and Valve Boxes

1.3 REFERENCE STANDARDS:

AWWA C500 - Gate Valves, 3-inch through 48-inch.

AWWA C509 - Resilient-Seated Gate Valves.

AWWA C550 - Protective Interior Coatings for Valves and Hydrants.

2.0 MATERIALS

2.1 HYDRANTS:

The Contractor shall be responsible for coordinating the materials needed with the Water Division General Foreman.

The Contractor shall furnish all rods and retainer glands required to properly anchor valves, fittings and hydrants.

When not provided by the City of Marlborough, hydrants shall be Mueller Super Centurion 200 or approved equal, meeting Marlborough Water & Sewer Standards.

3.0 CONSTRUCTION METHODS

3.1 INSTALLATION OF HYDRANTS:

Hydrant branches shall consist of a valve anchoring tee, 6-inch gate valve with gate box and one 6-inch ductile iron, mechanical joint nipple of required length.

Hydrants shall be set at the location shown on Drawings and bedded on a firm foundation. A drainage pit three feet in diameter and two feet deep below and to the rear of the hydrant shall be filled with crushed stone and satisfactorily compacted. During backfilling, additional peastone shall be brought up around and six inches over the drain port. All dimensions not specified herein shall be as noted on the Drawings.

Where directed by the Engineer, the Contractor shall install plugs in the hydrant drain ports. No hydrant shall be backfilled until Contractor is directed to do so by the Engineer. Each hydrant shall be set in true vertical alignment and properly braced. A formed concrete thrust blocks or material approved by the Engineer shall be placed around hydrant elbow before placing concrete. Care shall be taken to insure that concrete does not plug the drain ports. The concrete shall be placed as indicated on the Contract Drawings and as directed by the Engineer.

Following final project clean-up, all hydrants shall be given one field coat of paint which shall match existing system hydrants and be approved by the Engineer. Hydrant to be "bagged" until such time as they are tested, accepted and available for use by Fire Department.

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT:

Measurement of hydrant installation for payment shall be based on the number of units installed complete and in place with working connections to water main system.

Measurement for removing the existing hydrant and stacking shall be based on the number of units actually removed complete and stacked within the project limits for pick up by the DPW personnel.

4.2 PAYMENT:

Payment for hydrants shall be based on the contract unit price per hydrant which shall include labor, equipment, and material required to provide a working hydrant complete and in place including trench excavation to bottom of sand bedding, 12" sand envelope, excavation support (if required), dewatering (if required), connection to main, threaded rods, mega lugs, retainer glands, fittings, 6" – 1' extensions in order to bring the hydrant to proper grade, crushed stone, peastone, filter fabric, backfill, compaction, blue metallic warning tape, poured in place concrete thrust blocks, support blocks and restoring trench to proper grade for temporary paving.

4.3 PAYMENT ITEMS:

<u>Item#</u>	<u>Item</u>	<u>Unit</u>
376.	Hydrant	EA
376.1	Hydrant Removed and Stacked	EA

SECTION 300 COPPER TUBING

Item 347.075 ¾-inch Copper tubing, Type K

1.0 GENERAL

1.1 DESCRIPTION OF WORK:

The work to be performed under this section consists of furnishing the material, equipment, and labor to replace and/or install water services at the locations indicated on the Drawings as specified herein, and where directed by the Engineer.

1.2 RELATED SECTIONS:

Attention is directed to the General Conditions, Supplemental General Conditions, and Specific Conditions which are hereby made a part of this section. Other related sections include:

- Section 300 - Water Mains and Fittings
- Section 300 - Valves and Boxes
- Section 300 - Excavation
- Section 300 - Backfilling

1.3 REFERENCED STANDARDS:

City of Marlborough, Department of Public Works, Water use Regulations

2.0 MATERIALS

2.1 SERVICE PIPING:

Service piping shall be copper tubing type k. The service piping shall conform to the above- referenced standards for polyethylene with a pressure rating of 200 psi and a diameter of ¾ inch, 1-inch diameter or 1-1/2-inch as specified on the plans, or as directed by Engineer. Copper Tube sizes shall be used to allow the use of compression fittings without special adapters.

2.2 SERVICE BRASS:

All fittings, connections, corporations, curb stops, and service appurtenances shall be service brass as follows: Service brass shall conform to AWWA Standard C-800 (latest revision) and pack joint end connections shall consist of Buna-N beveled gasket for watertight seal. An independent, split-clamp locking device or stainless steel beveled gripper shall be incorporated in the design for additional restraint. Ford, Mueller, or Red Hed service brass is accepted without substitute.

2.3 CURB BOX:

The curb box shall be as noted in the City of Marlborough Water Regulations.

3.0 CONSTRUCTION METHODS

3.1 INSTALLATION OF CORPORATION STOPS:

Service saddles shall be used on all taps and installed as shown on the standard house connection detail or as directed by the Engineer. Installation shall conform to the manufacturer’s recommended instructions.

3.2 INSTALLATION OF SERVICE TUBING:

Care shall be exercised in the placing and laying of tubing to be sure that the pipe does not have kinks or is not placed on sharp stones or ledge which would cause damage to the pipe. Place in a 12-inch sand envelop around pipe, as shown on the Drawings, adjacent to, above and below the tubing. No stone shall be dropped on the tubing until the depth of backfill above the tubing is in excess of one foot.

Make connections of new services with existing services unless otherwise directed by the Engineer. Use bushings and/or couplings as required to connect new tubing with existing services.

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT:

Measurement for payment of service connections shall be based on the linear foot of services installed complete and in place. Measurement where each complete service constitutes a unit including curb stop and box, corporation stop, and all materials, equipment, and labor required to make connections and install service.

4.2 PAYMENT:

Payment for water services shall be based on the contract unit price per linear foot installed and measured as described in Part 4.1 of this Section. The contract unit price shall include all excavation and backfilling, blue water metallic warning tape, direct wet tap connection to water main, adaptors, service box, and service box brought to finish grade, compaction, tubing, (12-inch sand envelop typical), removal and disposal of existing water services being replaced, removal and disposal of existing curb stop, service box, corporation stop and all materials, equipment and labor required to furnish and install water services.

4.3 PAYMENT ITEMS:

<u>Item#</u>	<u>Item</u>	<u>Unit</u>
347.075	¾ In. Copper Tubing – Type k	LF

SECTION 403 RECLAIMED BASE COURSE

1.0 GENERAL

1.1 DESCRIPTION OF WORK:

This work shall consist of manufacturing a stabilized base course through the recycling a depth of 18 inches of existing pavement structure and acceptable sub-base material. The combination of pavement and sub-base material is to be uniformly crushed, pulverized and blended, then spread, graded and compacted to the lines and grades shown on the plans or established by the Engineer.

2.0 MATERIALS

All reclaim material shall conform to the requirements of following Subsections of Division III, Materials - Massachusetts Highway Department, Standard Specifications for Highway and Bridges: M1.11.0

Aggregate for Crushed Stone for blending, used to correct gradation deficiencies shall conform to the requirements of following Subsections of Division III, Materials - Massachusetts Highway Department, Standard Specifications for Highway and Bridges: M2.02.0 to M2.01.6

Aggregate for Dense Graded Crushed Stone for Sub-base shall conform to the requirements of following Subsections of Division III, Materials - Massachusetts Highway Department, Standard Specifications for Highway and Bridges: M2.01.7

3.0 CONSTRUCTION METHODS

3.1 GENERAL:

Reclaiming operations shall not be permitted when the existing pavement or sub-base contain frost, when the sub-base is excessively wet as determined by the Engineer, nor when the air or surface temperature is below 40°F.

Reclaiming operation shall not commence before April 15 and shall terminate on or before October 15, unless otherwise approved in writing by the Engineer

Prior to starting the reclaiming operations, the Contractor shall locate and protect existing drainage and utility structures and underground pipe, culverts, conduit and other appurtenances. The locations of all castings removed shall be given, in writing, to the Engineer.

The recycling equipment shall have a positive depth control to insure a uniform depth of processing. The equipment shall have the ability to process the complete design depth specified into a homogeneous mass. It shall also be capable of crushing all oversized material encountered except ledge, or boulders larger than 8" in diameter.

A minimum of fourteen days prior to the proposed start of the work, the Contractor shall submit in writing to the Engineer for approval, a description of the specific equipment and construction method to be used to perform the work.

Failure to meet gradation requirements or an insufficient production rate may be considered cause for rejection of the equipment, the construction method or both. The Contractor shall then submit in writing to the Engineer for approval the changes which shall be incorporated to obtain satisfactory results.

Otherwise, failure to meet gradation requirements due to improper equipment or construction methods shall not constitute a reason for any additional compensation for the import and blending of any aggregate to meet the deficiencies.

At least one vibratory roller shall be used on each reclaimed surface, and shall have a compacting width of not less than 5 feet. Each roller shall have a gross mass of not less than 16 tons.

Approved equipment shall be maintained in satisfactory working conditions at all times.

All drainage, utility and municipal structures are to be referenced and lowered to a minimum depth 6" below the proposed reclaimed base course. Lowered structures shall be covered with steel plates. The Contractor will be responsible for the coordination with the respective utility companies for the lowering and raising of privately owned structures and gate boxes. The reclaiming operation shall not begin until all structures and boxes are lowered.

It shall be the Contractor's responsibility to maintain drainage functioning properly in the areas under construction up to the time when the final system is put into use. Any drainage structure found to be deteriorated below the plated depth shall be rebuilt from the bottom of the deterioration to the plated depth.

Prior to the start of the reclamation process, the areas adjacent to the areas to be processed shall be saw cut full depth and the entire area to be reclaimed shall be made free all trash, sand, dirt, organic matter and other undesirable material, to the satisfaction of the Engineer.

Reclamation work shall be done on one-half the road width at a time. One way traffic will be allowed only during working hours with traffic police present. Two-way traffic shall be maintained at all other times. Suitable ramping shall be in place at the beginning and end of work zone to allow for smooth and safe travel. Ramping shall take place over a minimum of two feet.

Existing surplus reclaim material shall be used for grading sidewalks as directed by the Engineer, when available, at no additional compensation. All unsuitable material and/or excess reclaim material shall become the property of the Contractor to be properly disposed of outside the project limits.

The reclaimed material shall be rolled. Compacted and fine graded to the specified cross section(s) and/or grades shown or established by the Engineer.

At the end of each day's progress the Contractor shall apply water to the roadway to control dust. At the end of each work week the Contractor shall apply Calcium Chloride

in accordance with the applicable provisions of Section 440 – Roadway Dust Control. The use of Calcium Chloride may also be directed by the Engineer more frequently than stated above should field conditions warrant a more aggressive means of dust control.

A grader, roller and water wagon shall be maintained on the project site during the reclamation process. The Contractor shall submit to the Engineer, in writing, a twenty-four hour availability telephone number for any emergency maintenance dictated by the weather conditions or as determined by the Engineer, for repair, compaction and dust control. Should the Contractor not respond to an emergency call and the Department of Public Work have to respond in the Contractor's place, the Contractor shall be responsible for all cost incurred by the Department of Public Work to respond to the emergency.

Both gradation and compaction tests at 50 foot interval, the exact location to be determined by the Engineer, with 97% compaction required, shall be required in the reclaimed base area. Both gradation and compaction tests shall be performed 24 hours prior to the binder course of pavement being placed.

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT:

Reclaimed Base Course shall be measured in place, to the limits specified on the plans or as directed by the Engineer. No deduction will be made for surface structures. The lowering and plating of the gates and structures will be considered incidental to this item and no additional compensation will be allowed.

Both gradation and compaction testing shall be included in the price specified for Item – Reclaimed Base Course and no measurement is required.

Structures raised from the plated depth to the bituminous concrete binder course elevation or the bituminous concrete top course elevation (in one operation) shall be measured as a remodeled unit each, complete and approved.

Structures adjusted from the bituminous concrete binder course elevation to the finished grade elevation shall be measured as an adjusted unit each, complete and approved.

Structures rebuilt shall be measured by the average height in vertical feet and tenth of a foot from the bottom of the deterioration to the plated depth. Structures damaged below the plated depth, due to the Contractor's negligence, shall be measured and deducted from the vertical foot measurement. Raising the structure from the plated depth will be measured as stated above for a remodeled unit.

4.2 PAYMENT:

The accepted quantity of reclamation as measured above shall be paid for at the contract unit price bid under Item 403 Reclaimed Base Course. This unit price shall include all compensation for crushing, pulverizing, blending, spreading, grading, compacting, blending with additional material to achieve proper base material as directed by the Engineer, moving the processed material to allow for modifications to the remaining sub-base and/or subgrade, moving reclaimed material from one location to

another within the project and any incurred costs resulting from the Contractor’s decision to process off site.

The unit price bid shall also include compensation for all costs associated with the lowering and plating of the structures. It shall also include full compensation for all labor, tools, equipment, material and all incidental work necessary to complete the work as specified.

Removal and disposal of unsuitable material, surplus reclaim material, or any sub-base/subgrade material necessary for grade changes shall be included in the unit price per square yard for Item 403-Reclaimed Base Course.

Grading and compacting the sub-base and/or subgrade resulting from the removal of unsuitable material shall be paid for at the contract unit price per square yard for Item 170. – Fine Grading and Compaction – Subgrade Areas.

Adjustment of drainage structures shall be paid for at the contract unit price each for item 220.0 - Drainage Structure Adjusted.

Rebuilding of drainage structures shall be paid for at the contract unit price per vertical foot for Item 220.2 - Drainage Structure Rebuilt.

Raising of lowered structures shall be paid for at the contract unit price each for Item 220.5 - Drainage Structures Remodeled.

Reclaimed base course shall be paid for at the contract unit price for Item 403. Reclaimed Base Course.

4.3 PAYMENT ITEMS:

<u>ITEM #</u>	<u>ITEM</u>	<u>UNIT</u>
170	Fine Grading & Compaction – Subgrade	SY
220	Drainage Structure Adjusted	EA
220.2	Drainage Structure Rebuilt	VF
220.5	Drainage Structure Remodeled	EA
403	Reclaimed Base Course	SY
440	Calcium Chloride	LB

**SECTION 748
MOBILIZATION**

1.0 GENERAL

This item shall consist of preparatory work and operations including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site for the work and operations associated with the project that must be performed or for costs must be incurred prior to beginning the work.

2.0 MATERIALS

No materials are specified in this Section.

3.0 CONSTRUCTION METHODS

The work required to provide mobilization shall be done in a safe and workmanlike manner and shall conform to any pertinent local or state law, regulation or code. Good housekeeping consistent with safety shall be maintained.

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT:

Payment for mobilization will be made on a lump sum basis.

4.2 PAYMENT :

Payments shall be made in accordance with the following schedule:

- 1st Payment ¼ of the lump sum value or 1% of the total bid price, whichever is less
- 2nd Payment ¼ of the lump sum value or 1% of the total bid price, whichever is less, provided that 5% of the total project value is completed
- 3rd Payment ¼ of the lump sum value or 1% of the total bid price, whichever is less, provided that 10% of the total project value is completed
- 4th Payment Remainder of the lump sum price

4.3 PAYMENT ITEMS:

<u>Item #</u>	<u>Item</u>	<u>Unit</u>
748	Mobilization	LS

**SECTION 850
TRAFFIC CONTROLS FOR CONSTRUCTION
AND MAINTENANCE OPERATIONS**

1.0 GENERAL

Work under this item shall consist of providing, installing and maintaining various traffic control devices for the protection of the traveling public and working personnel during construction and maintenance operations in conformance with the Traffic Control Plan and the Manual on Uniform Traffic Control Devices (MUTCD).

Safety Controls for Construction Operations consist of furnishing, positioning, repositioning, maintaining and removing, as needed and/or as directed: traffic cones, high level warning devices, delineators, floodlights, Type I and II barricades, reflectorized barrels, portable flashing and steady burning lights, hand signal devices, and lanterns. This item does not include those specific items listed below.

Safety Signing for Construction Operations consist of furnishing, positioning, repositioning, maintaining and removing, as needed and/or as directed: regulatory, warning and guide signs together with their supports

2.0 MATERIALS

Materials required under this section need not be new, but must be in first class condition and acceptable to the Engineer. Safety signage must conform to the standard set per MUTCD.

3.0 CONSTRUCTION METHODS

All warning devices shall be subject to removal, replacement and/or repositioning as often as necessary. Warning devices not in use shall be removed from the project area.

All warning signs which are damaged or missing shall be replaced by the Contractor immediately and without additional compensation. All erected signs when not actually required shall be covered.

Traffic signal reconstruction shall be done in accordance with the plans and or at the direction of the Engineer. The reconstruction shall take place in a fashion that will cause a minimum of disruption to the flow of traffic through the intersection. Uniform traffic police shall be utilized to maintain the flow of traffic.

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT:

Safety Controls for Construction Operation shall be paid for as a lump sum item.

Safety Signage for Construction Operations will be measured by the square foot and the quantity shall be only that which is actually used on the project. Regardless of how many

times that a sign may be reused on the project, it will not be measured for payment more than once.

4.2 PAYMENT :

Safety control for construction operations shall be paid for at the contract unit price under the Item 852 - Safety Signage for Construction Operations. Lump sum payments will be made in equal amounts on each estimate based on the number of months estimated to complete the work.

Safety Signage for construction operations shall be paid for at the contract unit price under the Item 852 - Safety Signage for Construction Operations.

4.3 PAYMENT ITEMS:

<u>ITEM #</u>	<u>ITEM</u>	<u>UNIT</u>
851.	Safety Controls for Construction Operations	L.S.
852.	Safety Signage for Construction Operations	S.F.

**SECTION 870
STREET NAME SIGN STANDARDS**

1.0 GENERAL

1.1 DESCRIPTION

The following is the City of Marlborough street name sign standard.

2.0 MATERIALS

2.1 SIGN REQUIREMENTS

Materials shall conform to Massachusetts Department of Public Works, Standard Specifications for Highways and Bridges, 1988, Section 828 and 840 and shall be in conformance with the Manual on Uniform Traffic Control Devices, latest edition.

The City of Marlborough's Street Sign Standard is as follows:

Street signs shall consist of two 9 inch aluminum blank, flat, single sided with 1 inch radius corners, drilled in four locations.

High intensity blue Electrocut background with white Avery Prismatic letters.

6 inch letters (all capitalized) with 3 inch roadway designator (AVE, ST, RD, BLVD, etc.) centered vertically

Street signs shall be sandwiched between a 10 - 12 foot length*, 14 gauge, 1 3/4" aluminum square posts with a square rain cap and a 3'x 2"x 2", 12 gauge anchor.

Street signs shall be riveted to aluminum post with 3/8" blue rivet.

Edges of street signs shall be reinforced with 1 3/4" P.V.C. spacers and riveted.

It is recognized that technological progress may develop new and satisfactory materials and nothing in this specification shall be interpreted to exclude new materials that are acceptable to the Engineer.

2.2 APPROVED VENDERS CURRENTLY ON FILE WITH MARLBOROUGH D.P.W.+

Perma-Line Corporation
P.O. Box 4515
132 Court Street
Brockton, MA 02303

Phone: 508-588-6240

FAX: 508-587-2110

Atlantic Highway Sign Co.
Myles Standish Industrial Park
John Quincy Adams Road
Taunton, MA 02780

Phone: 774-226-1300

FAX: 617-361-2284

3.0 CONSTRUCTION METHODS

This work is to be done in accordance with both MUTCD standards and Section 840 of the 1988 edition of the Commonwealth of Massachusetts Department of Public Works Standard Specification for Highways and Bridges, as amended or as otherwise approved by the Engineer.

3.1 ADDITIONAL REQUIREMENTS

All sign must be erected 7 feet of clearance – bottom of sign to sidewalk area and/or finish grade.

All sign shall be set in concrete to depth of 24-inch min.

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

Payment for Street Name sign(s) shall be based on the contract unit price per each installed (complete). The contract unit price shall include all equipment, materials, labor, excavation, and backfilling, and incidentals required to furnish and erect signs including posts and concrete as required by the Engineer.

4.2 PAYMENT ITEMS:

<u>Item #</u>	<u>Item</u>	<u>Unit</u>
874	Street Name Sign	EA

City of Marlborough – Street Sign Specifications



SECTION 900 MISCELLANEOUS

1.0 GENERAL

This work shall include miscellaneous items required for completion of the project that do not specifically relate to standardized sections of the specifications. The work to be performed under this section consists of furnishing the material, equipment, and labor to perform work mentioned below at the locations indicated on the Drawings as specified herein, and where directed by the Engineer.

2.0 MATERIALS

Materials shall meet the Subsections of Division III, Materials - Massachusetts Highway Department, Standard Specifications for Highway and Bridges.

3.0 CONSTRUCTION METHODS

When conflicting or unknown utilities directly conflict with the installation of the new proposed utilities the respective utilities are to be relocated per Engineer's direction and approval. The contractor shall remove and replace existing utilities to allow the installation of the proposed drain, water and or sewer utilities.

Any existing foundation, private or gutter drains that are currently tied into the city drain line are to be reconnected only with the approval of the engineer. The field coring structures for building drains is to be done with an approved coring device.

The existing water saddles on Wood Road depicted on the construction drawings shall be replaced with new bronze saddles (as noted). There are also two other services on Gates Avenue that will require new bronze saddles as well. Care shall be taken when excavating around existing water main.

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT:

The relocation of obstructing utilities shall be measured per linear foot.

All field coring structures for building drains shall be measured per each.

Bronze saddles shall be measured per each.

4.3 PAYMENT :

The relocation of obstructing utilities shall include all labor, tools, materials and equipment necessary to excavate, remove and replace existing utilities. Backfill material and compaction is considered incidental to this item. The work shall be paid for at the contract unit price for Item 999.2- Relocating Obstructing Utilities.

Each field core for building drains shall be paid for at the contract unit price for item 999.3- Field Coring for Building Drains.

The replacement of saddles shall include all labor, materials including but not limited to corporation cocks, 12" sand envelope, compaction hardware and equipment necessary to excavate, remove and replace existing saddles. The work shall be paid for at the contract unit price for Item 999-4 4" Bronze Saddle and 999-5 8" Bronze Saddle.

4.3 PAYMENT ITEMS:

<u>ITEM #</u>	<u>ITEM</u>	<u>UNIT</u>
999.2	Relocating Obstructing Utilities	Linear Foot
999.3	Field Coring for Building Drains	Each
999.4	4" Bronze Saddle	Each
999.5	8" Bronze Saddle	Each

Appendix A

Supplemental Equal Opportunity Anti-Discrimination and Affirmative Action Plan

City of Marlborough
MARLBOROUGH, MASSACHUSETTS 01752-3812



**SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY
ANTI-DISCRIMINATION AND AFFIRMATIVE ACTION PLAN**

- I. For purposes of this contract, “minority” refers to Asian-Americans, Black, Spanish Surnamed Americans, North American Indians, and Cape Verdeans. “Commission” refers to the Massachusetts Commission Against Discrimination. “City” refers to the City of Marlborough.

- II. During the performance of this contract, the Contractor and all Subcontractors (hereinafter collectively referred to as the Contractor), for himself, his assignees, and successors in interest, agree as follows:
 1. In connection with the performance of work under this contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age or sex. The aforesaid provision shall include, but not be limited to, the following: employment upgrading demotion, or transfer; recruitment advertising; recruitment layoff; termination; rates of pay or other forms of compensation; conditions or privileges of employment; and selection for apprenticeship. The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Commission setting forth the provisos of the Fair Employment Practices Law of the Commonwealth (M.G.L. Chapter 151B).

 2. In connection with the performance of work under this contract, the Contractor shall undertake in good faith affirmative action measures designed to eliminate any discriminatory barriers in terms and conditions of employment on the grounds of race, color, religious creed, national origin, age or sex, and to eliminate and remedy any effects of such discrimination in the past. Such affirmative action shall entail positive and aggressive measures to ensure equal opportunity the are of hiring, upgrading, demotion or transfer, recruitment, layoff or termination, rate of compensation, and in-service or apprenticeship training program. This affirmative action shall include all action required to guarantee equal employment opportunity for all persons, regardless race, color, religious creed, national origin, age or sex. A purpose of this provision is to ensure to the fullest extent possible an adequate supply of skilled tradesmen for this and future public construction projects.

- III. 1. As part of his obligation of remedial action under the foregoing section, the Contractor shall maintain on this project a not less than five (5) percent ratio of minority employee man ours to total man hours in each job category including, but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers, and those “classes of work” enumerated in section 44C of Chapter 149 of the Massachusetts General Laws.

2. In the hiring of minority journeymen, apprentices, trainees and advanced trainees, the Contractor shall rely on referrals from a multi-employer affirmative action program approved by the Commission, traditional referral methods utilized by the construction industry, and referrals from agencies, not more than three in number at any one time, designated by the Liaison Committee, the Commission or the City.

IV. 1. At the discretion of the City there may be established for the life of this contract a body to be known as the Liaison Committee. The Liaison Committee shall be composed of one representative each from the administering agency, the City and such the representatives as may be designated by the City in conjunct in with the administering agency.

2. The Contractor (or his agent, if any, designated by him as the on-site equal employment opportunity officer) shall recognize the Liaison Committee as an affirmative action body, and shall establish a continuing working relationship with the Liaison Committee, consulting with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.

3. The Contractor shall prepare projected manning tables on a quarterly basis. These shall be broken down into projections, by week, of workers required in each trade. Copies shall be burnished one week on advance of the commencement of the period covered, and also when updated, to the City and Liaison Committee.

4. Records of employment referral orders, prepared by the Contractor, shall be made available to the City and to the Liaison Committee on request.

5. The Contractor shall prepare weekly reports in a form approved by the Commission of hours worked in each trade by each employee, identified as minority or non-minority. Copies of these shall be provided at the end of each such week to the City and to the Liaison Committee.

V. If the Contractor shall use any subcontractor on any work performed under this contract, he shall take affirmative action to negotiate with qualified minority subcontractors. This affirmative action shall cover both pre-bid and post-bid periods. It shall include notification to the Office of Minority Business Assistance (within the Executive Office of Communities and Development) or its designee, while bids are in preparation, of all products, work or services for which the Contractor intends to negotiate bids.

VI. In the employment of journeymen, apprentices, trainees and advanced trainees, the Contractor shall give preference, first, to citizens of the Commonwealth who have served in the armed forces of the United States in time or war and have been honorably discharged therefrom or released from active duty therein, and who are qualified to perform the work to which the employment relates, and, secondly, to citizens of the Commonwealth generally, and, if such cannot be obtained in sufficient number, then to citizens of the United States.

VII. A designee of the Commonwealth and a designee of the Liaison Committee shall each have right of access to the construction site.

VIII. Compliance with Requirement

The Contractor shall comply with the provisions of Executive Order No.74, as amended by Executive Order No. 116, dated May 1, 1975, and of Chapter 151B as amended, of the

Massachusetts General Laws, both of which are herein incorporated by reference and made a part of this contract.

IX. Non-Discrimination

The Contractor, in the performance of all work after award, and prior to completion of the contract work, will not discriminate on grounds of race, color, religious creed, national origin, age or sex in employment practices, in the selection or retention of subcontractors, or in the procurement of materials and rentals of equipment.

X. Solicitations for Sub-Contracts, and for the Procurement of Materials and Equipment

In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or equipment, each potential subcontractor or supplier shall be notified in writing by the Contractor of the contractor's obligations under this contract relative to non-discrimination and affirmative action.

XI. Bidders Certification Requirement

1. The bidders certification form currently in use will be deleted from all future bid documents.

2. The following certification statement will be included in the bid document just above the bidder's signature, as a substitute for the present bidder certification form:

"The bidder hereby certifies he shall comply with the minority manpower ratio and specific action steps contained in the appendix EEO attached hereto, including compliance specified in Section V of said appendix. The contractor receiving the award of the contractor shall be required to obtain from each of its subcontractors and submit to the contracting or administering agency prior to the performance of any work under said contract a certification by said subcontractor, regardless of tier, that it will comply with the minority manpower ratio and specific affirmative action steps contained in the appendix EEO."

XII. Contractor's Certification

The Contractor's certification form must be signed by all successful low bidder(s) prior to award by the contracting agency (See attachment).

XIII. Compliance Information, Reports and Sanctions

1. The Contractor will provide all information and reports required by the administering agency or the Commission on instructions issued by either of them and will permit access to its facilities and any books, records, accounts and other sources of information which may be determined by the Commission to affect the employment of personnel. This provision shall apply only to information pertinent to the supplementary affirmative action contract requirements. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the administering agency or the Commission as appropriate and shall set forth what efforts he has made to obtain the information.

2. Whenever the administering agency, the Commission, or the Liaison Committee believes the General Contractor or any Subcontractor may not be operating in compliance with the terms of this Section, the Commission directly, or through its designated agent, shall conduct an appropriate investigation, and may confer with the parties, to determine if such Contractor is operation in compliance. It shall make a preliminary report on non-compliance, and notify such Contractor is writing of such steps as will in the judgment of the Commission or its agent bring such Contractor into compliance. In the event that such Contractor fails or refuses do fully perform such steps, the Commission shall make a final report of non-compliance, and recommend to the administering agency the imposition of one or more of the sanctions listed below. If, however, the commission believes the General Contractor or any Subcontractor has taken or is taking every possible measure to achieve compliance, it shall not make a final report of non-compliance. Within fourteen days of the receipt of the recommendation of the Commission, the administering agency shall move to impose one or more of the following sanctions, as it may deem appropriate to attain full and effective enforcement:

- a. The recovery by the administering agency from the General Contractor of 1/100 of 1% of the contract award price or \$1000, whichever sum is greater, in the nature of liquidated damages or, if a Subcontractor is in non-compliance, the recovery by the administering agency from the General Contractor, to be assessed by the General Contractor as a back charge against the Subcontractor, of 1/100 of 1% of the subcontract price, or \$400, whichever sum is greater, in the nature of liquidated damages, for each week that such party fails or refuses to comply;
- b. The suspension of any payment or part thereof due under the contract until such time as the General Contractor or any Subcontractor is able to demonstrate his compliance with the terms of the contract;
- c. The termination, or cancellation, of the contract, in whole or in part, unless the General Contractor or any Subcontractor is able to demonstrate within a specific time his compliance with the terms of the contract;
- d. The denial to the General Contractor or any Subcontractor of the right to participate in any future contracts awarded by the administering agency for a period of up to three years.

3. If at any time after the imposition of one or more of the above sanctions a Contractor is able to demonstrate that he is in compliance with this Section, he may request the administering agency, in consultation with the Commission, to suspend the sanctions conditionally, pending a final determination by the Commission as to whether he Contractor is in compliance Upon final determination of the Commission, the administering agency based on the recommendations of the Commission, shall either lift the sanctions or re-impose them.

4. Sanctions enumerated under Sections XIII-2 shall not be imposed by the administering agency except after an adjudicatory proceeding as that term is used M.G.L. c30A, has been conducted. No investigation by the Commission or its agent shall be initiated without prior notice to the Contractor.

XIV. Severability

The provisions of this section are severable, and if any of these provisions shall be held unconstitutional by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions.

MINIMUM MINORITY PERCENTAGES TO BE APPLIED TO CITY,
STATE AND STATE ASSISTED CONTRACTS
WITHIN THE COMMONWEALTH OF MASSACHUSETTS

The following percentages shall apply	<u>No less than</u>
Boston: Impact Area (Jamaica Plain (part), Mattapan, South Cove, Chinatown, Bay Village, Roxbury, Dorchester, South End)	30%
Others	10%
Cambridge	12%
New Bedford	18%
Springfield	10%
All other towns and cities	5%

Appendix B
State Wage Rates