CITY OF NEWTON
PURCHASING DEPARTMENT

PROJECT FOR PUBLIC BUILDINGS DEPARTMENT

PROJECT MANUAL:

CCTV SURVEILLANCE SYSTEM

(Newton North High School)

(Newton South High School)

INVITATION FOR BID #11-50

Pre Bid Meeting: February 3, 2011 at 11:00 a.m.

Bid Opening Date: February 10, 2011 at 11:00 a.m.

Plans and Specifications
Prepared by:
RDK Engineers
Contact: Barry Poitras (978) 296-6365

JANUARY 2011

Setti D. Warren, Mayor

CITY OF NEWTON, MASSACHUSETTS

PURCHASING DEPARTMENT
purchasing@newtonma.gov
Fax (617) 796-1227

February 8, 2011

ADDENDUM #1

INVITATION FOR BID #11-50

SUPPLY, DELIVER & INSTALL CCTV SURVEILLANCE SYSTEMS IN NEWTON NORTH AND NEWTON SOUTH HIGH SCHOOLS

THIS ADDENDUM IS TO: **Change Specifications and Answer the following Questions from the PreBid Meeting and received in office:**

SPECIFICATION CHANGE: Section 280000, 2.02, 2.f. – Revise to read "Network switch shall be manufactured by Cisco P/N C2960-24PC-L, 24-port 100BASE-T PoE switch."

Option One Clarification: Contractor shall carry in Base Bid all CCTV cameras indicated on floor plans including Option #1 locations. Contractor shall provide add/deduct alternate price to eliminate all CCTV camera locations not indicated with an option #1 designation.

Q1. What is the existing card access for the schools?
A1. Lenel for North, none for South.

Q2. To bid this job, does the contractor have to tie into the existing system?
A2. YES

Q3. Are we bidding direct to the City and or to a General Contractor?
A3. Direct to the City.

Q4. Is Newton North High School the brand new high school?
A4. YES

Q5. Is the construction of Newton North High School complete?
A5. YES

Q6. What is the DCAM limit?
A6. DCAM is required for all General Bidders and Sub-Bidders for projects over $100,000.

Q7. Does NSHS have penetration sleeves to get the cables up vertically?
A7. YES, 4" sleeves are available in Telecom Rooms.

Q8. RCDD requirement?
A8. NO

Q9. What is the procedure for asking for an extension?
A9. All requests must be in writing addressed to the Chief Procurement Officer.

Q10. Extended warranty can this be sub-contracted to a company that provide this?
A10. YES, extended manufacturer warranty is required on cable system. 3-years for CCTV components.

Q11. What is the percentage of MBWE participation?
A11. Refer to bid specifications.

Q12. What are the hours of the schools?
A12. Working hours are 3 p.m. – 11 p.m., Monday through Friday

Q13. Will there be certification for warranty?
A13. YES

Q14. Who has the current contract for the card access?
A14. Griffin Electric for North High but it is a Lenel system.

Q15. Do all certifications have to be present at time of bid?
A15. YES

Q16. Are there any core requirements?
A16. YES, contractor shall provide all conduit coring, penetrations, and installation.

Q17. Do the sub-contractors need to be listed under category 3?
A17. YES

Q18. Can your sub-contractor meet the DCAM requirement?
A18. NO

Q19. Does the school system have its own IT division?
A19. YES

Q20. Are there any specifications relating to electrical work to be done?
A20. Electrical scope is limited to conduit and pathways provided by this bidder.

Q21. Is the attached DCAM Certificate (attached) submitted with an update statement acceptable?
A21. DCAM Certificate of Eligibility must be submitted with bid.

Q22: Will using a DCAM certified (Telecommunications Systems) subcontractor satisfy said requirement?
A22. The prime contractor must be certified.

Q23. I am seeking clarification on the section below in #11-50 CCTV Surveillance System - Newton North / Newton South High School. All General Bids must be accompanied by a copy of a "Certificate of Eligibility" (DCAM Form CQ-7) issued by the Department of Capital Asset Management and Maintenance (DCAM) and a "Contractor Update Statement" (DCAM Form CQ-3). The categories of work for which the Bidder must be certified are: Alarm Systems and Telecommunication Systems

My question must the Prime carry the Alarm Systems and Telecommunications Systems certificates above, or may one of the Prime's subcontractors carry the certificate(s)?

A23. Prime

Q24. Can we have a week extension on this bid submission? The short timeline for submission following the walkthroughs and bidders conference is not enough to develop a thorough proposal. I also wanted to see if any formal addendums would be published as this would also warrant this extra week to take this information into consideration.

A24. Not at this time.

Q25. Regarding the DCAM certification that is required for the bidder; can a valid subcontractor hold this cert instead of the prime bidder?

A25. NO

Q26. What is the current Access Control system?

A26. Lenel in North, none for South.

Q27. Does Video Management need to reside in a VM?

A27. Video management must reside in a way that meets or exceed section 280000, 2.01.A.4.

Q28. VMS shall support software designed for the Microsoft® Windows® 2003 or Windows XP operating systems – Can this requirement be explained?

A28. Software must be enterprise edition compatible with Microsoft operating system and standard server storage systems.

Q29. With regard to the Prevailing Wage Rates furnished with the bid documents, what wage rates are we to use to pay our people on this project? Electrician, Telecommunication Technician, or Teledata Wireman Installer/Technician? Advise please?

A29. Prevailing Wages apply to the personnel you are using for the project.

Q30. I understand that the Prime contractor has to be DCAM Certified in Alarm Systems and Telecommunications Systems. Is it acceptable to provide a Subcontractor to comply with Section 280000, 1.03, A, B, C, D?

A30. No, Prime Contractor must be DCAM certified.

All other terms and conditions of this bid remain unchanged.

PLEASE ENSURE THAT YOU ACKNOWLEDGE THIS ADDENDUM ON YOUR BID FORM.

Thank you.

Rositha Durham
Chief Procurement Officer

CITY OF NEWTON

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Newton North and South High School

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DRAWINGS – 44 PAGES *PLANS MUST BE OBTAINED THROUGH THE PURCHASING DEPT.*
(call [617] 796-1220 or email purchasing@newtonma.gov for availability)

CITY OF NEWTON
PURCHASING DEPARTMENT
INVITATION FOR BID

The City of Newton invites sealed bids from Contractors for

CCTV SURVEILLANCE SYSTEM FOR THE
NEWTON NORTH AND SOUTH HIGH SCHOOL

Pre-bid will be held at: **11:00 a.m., February 3, 2011 at City Hall, Room 204**
Bids will be received until **11:00 a.m., February 10, 2011**
at the Purchasing Department, Room 204, Newton City Hall, 1000 Commonwealth Ave., Newton, MA 02459. Immediately following the deadline for bids all bids received within the time specified will be publicly opened and read aloud.

Work under this contract shall consist of: CCTV surveillance system and cabling infrastructure within the Newton North and South High Schools. **Work is expected to begin two weeks after day of contract execution and shall be completed within 120 calendar days**.

Contract Documents will be available **online at the City's website: www.ci.newton.ma.us/bids or** for pickup at the Purchasing Department or after: **10:00 a.m., January 27, 2011.** There will be no charge for contract documents.

All General Bids must be accompanied by a copy of a "Certificate of Eligibility" (DCAM Form CQ-7) issued by the Department of Capital Asset Management and Maintenance (DCAM) and a "Contractor Update Statement" (DCAM Form CQ-3). The categories of work for which the Bidder must be certified are: **Alarm Systems and Telecommunication Systems**

Award will be made to the bidder with the lowest total contract price, including any accepted alternates, that has been deemed responsible and eligible. **All bids shall be submitted as one ORIGINAL and one COPY.**

All bids must be accompanied by a bid deposit in an amount that is not less than five percent (5%) of the value of the bid, including all add alternates. Bid deposits, payable to the City of Newton, shall be either 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.

All bids are subject to the provisions of M.G.L. Chapter 149, Section 44 A-J. **Wages are subject** to minimum wage rates determined by the Massachusetts Department of Labor and Industries pursuant to M.G.L. Chapter 149, Sec. 26 to 27H. The schedule of wage rates applicable to this contract is included in the bidding documents. In addtion, the prevailing wage schedule will be updated annually for all public construction projects lasting longer than one (1) year. You will be required to pay the rates set out in any updated prevailing wage schedule. Increases in prevailing wage schedules will not be the basis for change order requests. The successful bidder will be required to provide a Certificate of Insurance demonstrating current coverage of the type and amounts set forth in the Project Manual**.** The successful bidder will be required to furnish a **Performance and Labor and Materials Payment Bond each in the amount of 100%** of the contract total.

Bidders attention is directed to the requirements of the City of Newton Supplemental Equal Employment Opportunity, Anit-Discriminitation and Affirmative Action Program and also to the Minority/Women Business Enterprise Plan, December 1999, all of which are hereby incorporated into the Contract Documents. In the event of conflict between any of the above listed policies, the stricter policy shall apply.

City of Newton bids are available on the City's web site, **www.ci.newton.ma.us/bids.** It is the sole responsibility of the contractor downloading these bids to ensure they have received any and all addenda prior to the bid opening. Addenda's will be available online within the original bid document as well as a separate file. If you download bids from the internet site and would like to make it known that your company has done so, you may fax the Purchasing dept. (617) 796-1227 or e-mail purchasing@newtonma.gov with your NAME, ADDRESS, PHONE, FAX AND INVITATION FOR BID NUMBER. **Obtain plans through the Purchasing department.**

The City of Newton will reject any and all bids when required to do so by the above referenced General Laws. In addition, the City of Newton reserves the right to waive any informalities in any or all bids, or to reject any or all bids (in whole or in part) if it be in the public interest to do so.

CITY OF NEWTON
Rositha Durham
Chief Procurement Office
January 27, 2011

CITY OF NEWTON

DEPARTMENT OF PURCHASING

INSTRUCTIONS TO BIDDERS

ARTICLE 1 – BIDDER'S REPRESENTATION

1.1. Each General Bidder (hereinafter called the "Bidder") by making a bid (hereinafter called "bid") represents that:

1.2. The Bidder has read and understands the Contract Documents and the bid is made in accordance therewith.

1.3. The Bidder has visited the site and is familiar with the local conditions under which the Work has to be performed.

1.4. Failure to so examine the Contract Documents and site will not relieve any Bidder from any obligation under the bid as submitted.

ARTICLE 2 - REQUEST FOR INTERPRETATION

2.1 Bidders shall promptly notify the City of any ambiguity, inconsistency, or error which they may discover upon examination of the Contract Documents, the site, and local conditions.

2.2 Bidders requiring clarification or interpretation of the Contract Documents shall make a written request to the *Chief Procurement Officer*, at purchasing@newtonma.gov or via facsimile (617) 796-1227. The City will answer such requests if received prior to Friday, February 4, 2011at 12:00 noon.

2.3 Interpretation, correction, or change in the Contract Documents will be made by Addendum which will become part of the Contract Documents. The City will not be held accountable for any oral instruction.

2.4 Addenda will be emailed to every individual or firm on record as having taken a set of Contract Documents.

2.5 Copies of addenda will be made available for inspection at the location listed in the Invitation for Bids where Contract Documents are on file, in addition to being available online at **www.ci.newton.ma.us/bids**.

2.6 Bidders downloading information off the internet web site are soley responsible for obtaining any addenda prior to the bid opening. If the bidder makes themselves known to the Purchasing Dept., at purchasing@newtonma.gov or via facsimile (617) 796-1227, they shall be placed on the bidder's list. Bidders must provide the Purchasing Dept. with their company's name, street address, city, state, zip, phone, fax, email address and **INVITATION FOR BID NUMBER #11-50**.

ARTICLE 3 – MBE PARTICIPATION

3.1 Notice is hereby given that the Mayor's Affirmative Action Plan for the City of Newton, dated December 1999 is applicable to all construction contracts in excess of $10,000.00. A copy of this plan is on file at City of Newton Purchasing Department.

3.2 Notice is hereby given that the City of Newton Minority/Women Business Enterprise Plan dated December 1999 and the Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program is applicable to all City contracts for goods and services in excess of $50,000.00. Copies of these plans are incorporated in the bidding documents.

ARTICLE 4 – PREPARATION AND SUBMISSION OF BIDS

4.1 Bids shall be submitted on the "Bid Form" as appropriate, furnished by the City.

4.2 All entries on the Bid Form shall be made by typewriter or in ink.

4.3 Where so indicated on the Bid Form, sums shall be expressed in both words and figures. Where there is a discrepancy between the bid sum expressed in words and the bid sum expressed in figures, the words shall control.

4.4 Bid Deposits shall be submitted in the amount specified in the Invitation for Bids. They shall be made payable to the City of Newton and shall be either in the form of cash, certified check, treasurer's or cashier's check issued by a responsible bank or trust company, or a bid bond issued by a surety licensed to do business in the Commonwealth of Massachusetts; and shall be conditioned upon the faithful performance by the principal of the agreements contained in the bid.

Bid deposits of the three (3) lowest responsible and eligible Bidders shall be retained until the execution and delivery of the Owner/Contractor agreement.

4.5 The Bid, including the bid deposit shall be enclosed in a sealed envelope with the following plainly marked on the outside:GENERAL BID FOR:

NAME OF PROJECT AND **INVITATION NUMBER**

BIDDER'S NAME, BUSINESS ADDRESS, AND PHONE NUMBER

Date and time for receipt of bids is set forth in the Invitation for Bids.

4.6 Timely delivery of a bid at the location designated shall be the full responsibility of the Bidder.

4.7 Bids shall be submitted with one **original** and one **copy.**

4.8 Be advised that a new Massachusetts law has been enacted that required all employees who work on Massachusetts public works construcion sites must have no less than 10 hours of OSHA-approved safety and health training. See Chapter 306 of the Acts of 2004, which will become effective July 1, 2006.

1. This requirement will apply to any general bid or sub bid submitted on or after July 1, 2006 and to any contract awarded on or after July 1, 2006.
2. This law directs the Massachusetts Attorney General to restrain the award of construction contracts to any contractor who is in violation to this requirement and to restrain the performance of these contracts by non-complying contractors.
3. The contractor and all subcontractors on this project will be required to provide certification of compliance with this requirement. Non-compliance with this new Massachusetts Law will disquality you from bidding on public contracts.

ARTICLE 5 – ALTERNATES

5.1 Each Bidder shall acknowledge Alternates (if any) in Section C on the Bid Form.

5.2 In the event an Alternate does not involve a change in the amount of the base bid, the Bidder shall so indicated by writing "No Change", or "N/C" or "0" in the space provided for that Alternate.

5.3 Bidders shall enter on the Bid Form a single amount for each Alternate which shall consist of the amount for work performed by the Contractor.

5.4 The low Bidder will be determined on the basis of the sum of the base bid and the accepted alternates.

ARTICLE 6 – WITHDRAWAL OF BIDS

6.1 Any bid may be withdrawn prior to the time designated for receipt of bids on written or telegraphic request. Telegraphic withdrawal of bids must be confirmed over the Bidder's signature by written notice postmarked on or before the date and time set for receipt of bids.

6.2 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids.

6.3 No bids shall be withdrawn within thirty days, Saturdays, Sundays and legal holidays excluded, after the opening of the bids.

ARTICLE 7 – CONTRACT AWARD

7.1 The City of Newton will award the contract to the lowest eligible and responsible Bidder within thirty days, Saturdays, Sundays, and legal holidays excluded after the opening of bids.

7.2 The City of Newton reserves the right to waive any informalities in or to reject any or all Bids if it be in the public interest to do so.

7.3 As used herein, the term "lowest responsible and eligible Bidder" shall mean the Bidder (1) whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; (2) who shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (3) who, where the provisions of section eight B of chapter twenty-nine apply, shall have been determined to be qualified thereunder.

7.4 Subsequent to the award and within five (5) days, Saturday, Sundays and legal holidays excluded, after the prescribed forms are presented for signature, the successful Bidder shall execute and deliver to the City a Contract in the form included in the Contract Documents in such number of counterparts as the City may require.

7.5 In the event that the City receives low bids in identical amount from two or more responsive and responsible Bidders, the City shall select the successful Bidder by a blind selection process such as flipping a coin or drawing names from a hat. The low Bidders who are under consideration will be invited to attend and observe the selection process.

ARTICLE 8 – TAXES

8.1 The Bidder shall not include in this bid any tax imposed upon the sale or rental of tangible personal property in this Commonwealth, such as any and all building materials, supplies, services and equipment required to complete the work.

8.2 The City is exempt from payment of the Massachusetts Sales Tax, and the Bidder shall not include any sales tax on its bid. The City's exemption Number is E-046-001-404.

END OF SECTION

CITY OF NEWTON
FORM FOR GENERAL BID #11-50

CCTV SURVEILLANCE SYSTEM
Newton North and South High School

TO THE AWARDING AUTHORITY:

A. The undersigned proposes to furnish all labor and materials required for boiler & related equipment removal and replacement in Newton, Massachusetts in accordance with the accompanying plans and specifications prepared by the City of Newton for the contract price specified below, subject to additions and deductions according to the terms of the specifications.

B. This bid includes addenda number(s) _____, _____, _____, _____,

C. The proposed contract price is:

_____DOLLARS ($_____)

For Alternate No. _____ Add $ _____; Subtract $ _____
For Alternate No. _____ Add $ _____; Subtract $ _____

1. Provide alternate to eliminate all CCTV cameras not indicated as Option #1.

COMPANY:_____

The sub-division of the proposed contract price is as follows:

Item 1. The work of the General Contractor, being all work other than that covered by Item 2
Total of Item 1: $ ____N/A_____

Item 2. Sub-bids as follows:

Sub-Trade	Name of Sub-bidder	Amount	Bond Required ? (Yes or No)
N/A	N/A	$ N/A	N/A

Total of Item 2: $ N/A

The undersigned agrees that each of the above named sub-bidders will be used for the work indicated at the amount stated, unless a substitution is made. The undersigned further agrees to pay the premiums for the performance and payment bonds furnished by sub-bidders as requested herein and that all of the cost of all such premiums is included in the amount set forth in Item 1 of this bid.

The undersigned agrees that if s/he is selected as general contractor, s/he will promptly confer with the awarding authority on the question of sub-bidders; and that the awarding authority may substitute for any sub-bid listed above a sub-bid filed with the awarding authority by another sub-bidder for the sub-trade against whose standing and ability the undersigned makes no objection; and that the undersigned will use all such finally selected sub-bidders at the amounts named in their respectivesub-bids and be in every way as responsible for them and their work as if they had been originally named in this general bid, the total contract price being adjusted to conform thereto.

The undersigned has completed and submits herewith the following documents:

- ❑ A five percent (5%) bid deposit/bid guarantee.
- ❑ Signed Bid Form, 2 pages
- ❑ Certificate of Eligibility for Alarm Systems (DCAM Form), Supplied by Bidder
- ❑ Certificate of Eligibility for Telecommunication Systems (DCAM Form), Supplied by Bidder
- ❑ Certificate of Non-Collusion, 1 page

D. The undersigned agrees that, if s/he is selected as general contractor, s/he will within five 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 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 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 s/he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work and that s/he will comply fully with all laws and regulations applicable to awards made subject to section forty-four A of M.G.L. Chapter 30, s 39M.

The undersigned certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) 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 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; and (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States OSHA that is at least 10 hours in duration. The undersigned understands that any employee found on a worksite subject to this section without documentation of successful completion of 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 shall be subject to immediate removal.

The undersigned further certifies that s/he intends to comply with the City of Newton Minority/Women Business Enterprise Plan, dated December 19, 1999 to further expand business opportunities for minority firms.

The undersigned further certifies under the penalties 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 of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

Date :_____

_____
(Name of General Bidder)

BY:_____
(Signature)

_____
(Printed Name and Title of Signatory)

_____
(Business Address)

_____
(City, State Zip)

_____/_____
(Telephone) (FAX)

_____
E-mail address (optional)

NOTE: If the bidder is a corporation, indicate state of incorporation under signature, and affix corporate seal; if a partnership, give full names and residential addresses of all partners; and if an individual, give residential address if different from business address.

END OF SECTION

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee club, or other organization, entity, or group or individuals.

_____
(Signature of individual)

_____
Name of Business

CONTRACT FORMS

The forms are provided for informational purposes only.

The awarded bidder will be required to complete and submit the following documents in order to execute a contract pursuant to this bid.

None of the following forms are required at the time of bid submittal.

OWNER-CONTRACTOR CONTRACT

CONTRACT NO. C _____

THIS AGREEMENT made this ___ day of _____ in the year Two Thousand and Eleven by and between the CITY OF NEWTON, a municipal corporation organized and existing under the laws of the Commonwealth of Massachusetts, hereinafter referred to as the CITY, acting through its Chief Procurement Officer, but without personal liability to him, and

hereinafter referred to as the CONTRACTOR.

WITNESSETH, that the parties hereto for the consideration hereinafter set forth agree as follows:

ARTICLE 1. **STATEMENT OF WORK.** The Contractor shall furnish all labor, materials, equipment and insurance, and perform all work required in strict accordance with the Project Manual entitled:

CCTV Surveillance System at
North and South High School

hereinafter referred to as the SPECIFICATIONS, and the Addenda thereto numbered _____,and all the Drawings referred to therein.

The said Specifications, Addenda and Drawings are incorporated herein by reference and are made a part hereof.

ARTICLE 2. **TIME OF COMPLETION.** The Contractor shall commence work under this Contract on the date specified in the written notice of the City to proceed and shall fully complete all work hereunder within the time (120 calendar days) stated elsewhere in the contract documents.

ARTICLE 3. **THE CONTRACT PRICE.** The City shall pay the Contractor pursuant to and in accordance with the provisions set forth in the Contract Documents, subject to additions and deductions in accordance with the terms of the Specifications, for the full and satisfactory performance of the Contract the sum of:

ARTICLE 4. **CONTRACT DOCUMENTS.** The Contract shall consist of the following component parts, copies of which are attached hereto:

a. The City's Invitation For Bid #11-50 issued by its Purchasing Department;

b. Project Manual for CCTV SURVEILLANCE SYSTEM at Newton North and South High School

c Addenda Numbers ___ to the above referenced Project Manual and/or Plans;

d. The bid of #11-50 dated January 27, 2011 and signed by Rositha Durham, including the Bid Form and Bidder's Qualifications Form and References;

e. Attestation/Certification

This Contract Form, together with the other documents enumerated in this Article 4 form the Contract.

ARTICLE 5. **ALTERNATES.** The following Alternates have been accepted and their costs are included in the Contract Price stated in Article 3 of this Agreement:

Alternates:_____.

ARTICLE 6. **APPLICABLE STATUTES.** All applicable federal, state and local laws and regulations are incorporated herein by reference and the Contractor agrees to comply with same.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed under seal the day and year first above written.

CONTRACTOR

By _____
Title_____

Date_____

Affix Corporate Seal Here

City funds in the amount of $_____
are available in account number
31G115A1-5825

I further certify that the Mayor is
authorized to execute contracts and
approve change orders

By_____
Comptroller of Accounts

Date _____

CITY OF NEWTON

By _____
Chief Procurement Officer

Date_____

By_____
Commissioner of Public Buildings

Date_____

Approved as to Legal Form and
Character

By_____
Associate City Solicitor

Date_____

CONTRACT AND BONDS APPROVED

By_____
Setti D. Warren, *Mayor*

Date_____

CERTIFICATE OF AUTHORITY - CORPORATE

1. I hereby certify that I am the Clerk/Secretary of _____
(insert full name of Corporation)

2. corporation, and that _____
(insert the name of officer who signed the **contract and bonds**.)

3. is the duly elected _____

(insert the title of the officer in line 2)

4. of said corporation, and that on _____
(insert a date that is ***ON OR BEFORE*** the date the officer signed the **contract and bonds**.)

at a duly authorized meeting of the Board of Directors of said corporation, at which all the directors were present or waived notice, it was voted that

5. _____ the _____
(insert **name** from line 2) (insert **title** from line 3)

of this corporation be and hereby is authorized to execute contracts and bonds in the name and on behalf of said corporation, and affix its Corporate Seal thereto, and such execution of any contract of obligation in this corporation's name and on its behalf, with or without the Corporate Seal, shall be valid and binding upon this corporation; and that the above vote has not been amended or rescinded and remains in full force and effect as of the date set forth below.

6. ATTEST: _____ *AFFIX CORPORATE SEAL HERE*
(Signature of **Clerk or Secretary**)*

7. Name: _____
(Please print or type name in line 6)*

8. Date: _____
(insert a date that is ***ON OR AFTER*** the date the officer signed the **contract and bonds**.)

* The name and signature inserted in lines 6 & 7 **must** be that of the **Clerk or Secretary** of the corporation.

ATTESTATION

Pursuant to MG c. 62C, § 49A, the undersigned acting on behalf of the Contractor, certifies under the penalties of perjury that, to the best of the undersign's knowledge and belief, the Contractor is in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.*

_____
**Signature of Individual
or Corporate Contractor (Mandatory)

_____
*** Contractor's Social Security Number
(Voluntary) or Federal Identification Number

By: _____
Corporate Officer
(Mandatory, if applicable)

Date: _____

* The provision in the Attestation relating to child support applies only when the Contractor is an individual.

** Approval of a contract or other agreement will not be granted unless the applicant signs this certification clause.

*** Your social security number will be furnished to the Massachusetts Department of Revenue to determine whether you have met tax filing or tax payment obligations. Providers who fail to correct their non-filing or delinquency will not have a contract or other agreement issued, renewed, or extended. This request is made under the authority of GL c. 62C, § 49A.

CITY OF NEWTON, MASSACHUSETTS

PERFORMANCE BOND

Know All Men By These Presents:

That we, _____, as PRINCIPAL, and _____, as SURETY, are held and firmly bound unto the City of Newton as Obligee, in the sum of

dollars **($_____)** to be paid to the Obligee, for which payments well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the said PRINCIPAL has made a contract with the Obligee, bearing the date of _____ _, 2010 for the construction of _____ in Newton, Massachusetts.

(Project Title)

Now, the condition of this obligation is such that if the PRINCIPAL and all Sub-contractors under said contract shall well and truly keep and perform all the undertakings, covenants, agreements, terms and conditions of said contract on its part to be kept and performed during the original term of said contract and any extensions thereof that may be granted by the Obligee, with or without notice to the SURETY, and during the life and any guarantee required under the contract, and shall also well and truly keep and perform all the undertakings, covenants, agreements, terms and conditions of any and all duly authorized modifications, alterations, changes or additions to said contract that may hereafter be made, notice to the SURETY of such modifications, alterations, changes or additions being hereby waived, then this obligation shall become null and void; otherwise, it shall remain in full force, virtue and effect.

In the event, that the contract is abandoned by the PRINCIPAL, or in the event that the Obligee terminates the employment of the PRINCIPAL or the authority of the PRINCIPAL to continue the work said SURETY hereby further agrees that said SURETY shall, if requested in writing by the Obligee, take such action as is necessary to complete said contract.

In Witness Whereof, the PRINCIPAL and SURETY have hereto set their hands and seals this ___day of _____ 2010.

PRINCIPAL	SURETY
_____	_____
BY_____	BY _____
(SEAL)	(ATTORNEY-IN-FACT) (SEAL)
_____	
(Title)	
ATTEST: _____	ATTEST: _____

CITY OF NEWTON, MASSACHUSETTS

PAYMENT BOND

Know All Men By These Presents:

That we, _____, as PRINCIPAL, and _____, as SURETY, are held and firmly bound unto the City of Newton as Obligee, in the sum of

dollars **($_____)** to be paid to the Obligee, for which payments well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the said PRINCIPAL has made a contract with the Obligee, bearing the date of _____ _, 2010, for the construction of _____ in Newton, Massachusetts.

(Project Title)

Now, the conditions of this obligation are such that if the PRINCIPAL and all Sub-contractors under said contract shall pay for all labor performed or furnished and for all materials used or employed in said contract and in any and all duly authorized modifications, alterations, extensions of time, changes or additions to said contract that may hereafter be made, notice to the SURETY of such modifications, alterations, extensions of time, changes or additions being hereby waived, the foregoing to include any other purposes or items set out in, and to be subject to, provisions of M.G.L. c. 30, sec. 39A, and M.G.L. c. 149 sec. 29, as amended, then this obligation shall become null and void; otherwise it shall remain in full force, virtue and effect.

In Witness Whereof, the PRINCIPAL and SURETY have hereto set their hands and seals this ___day of_____2010.

PRINCIPAL	SURETY
_____	_____
BY_____	BY _____
(SEAL)	(ATTORNEY-IN-FACT) (SEAL)
_____ (Title)	
ATTEST: _____	ATTEST: _____

GENERAL CONDITIONS
OF THE CONTRACT
FOR NON-TECHNICAL SERVICES

The City of Newton, herein referred to as the City, does hereby establish the following General Conditions, applicable to this Invitation for Bids and any subsequent purchase order, work order, work order or contract resulting therefrom.

1.0 SCOPE OF SERVICES

1.1 The Contractor agrees to furnish all labor, materials, equipment and insurance necessary to perform and fully complete, in every respect, within the time frame herein specified, all work (hereinafter referred as the Services) described in the Project Manual.

1.2 The Contractor shall not make any changes in the scope of Services without the prior written consent of the City. The Contractor shall make reasonable revisions or corrections, within the scope of Services, to any work performed until submitted in a form acceptable to the City.

1.3 The City reserves the right to alter, add to or reduce the Services by delivering to the Contractor written notice specifying the nature and extent of such alteration, addition or reduction. Such notice shall be effective upon the later of actual receipt by the Contractor or upon the date given in such notice. No addition to the Services shall be made unless the City and the Contractor have agreed to such increase in writing.

2.0 CONTRACT TERM

2.1 The obligations of the Contractor identified herein shall commence upon execution of the City-Contractor Contract and shall continue in full force and effect for the duration of the contract term as identified in the Project Manual. The contractor shall commence the performance of services under this contract promptly upon receipt of the City's Notice to Proceed in accordance with the provisions identified in the Project Manual.

2.2 In the event the term of this contract exceeds a period of one year and notwithstanding any provision to the contrary herein, the City shall cancel this contract in the event that funds are not appropriated or otherwise made available to support continuation of performance by the Contractor in any fiscal year succeeding the first year.

3.0 EXECUTION

3.1 All work required hereunder shall be performed as promptly as possible, and in any event within the time herein set forth, and such work shall be subject to approval and acceptance by the City, but such approval and acceptance shall not relieve the Contractor from the obligation to correct any incomplete, inaccurate or defective work, all of which shall be promptly remedied by the Contractor on demand, without cost to the City. The Contractor shall obtain all the required licenses and permits for the work herein described.

3.2 The Contractor shall conform to all determinations and directions of the City concerning the Contractor's delivery of services in the event of inclement weather, equipment failure, picket lines on City property, or labor strikes by the contractor's employees.

4.0 COMPENSATION

4.1 The City shall pay the Contractor for services rendered under this contract in accordance with the amount(s) set forth in the Contractor's General Bid Form and pursuant to the provisions contained in the Project Manual.

4.2 Notwithstanding anything to the contrary contained in the Contract, the City may withhold any payment to the Contractor hereunder if and for so long as the Contractor fails to perform any of its obligations hereunder or otherwise is in default under this Contract including, without limitation, any failure to perform Services in full accordance with the amount sufficient in the reasonable opinion of the City to cure any such default or failure of performance by the Contractor.

4.3 In no event shall the City be required to pay any amounts for work deemed by it to be unacceptable, or which are otherwise disputed. In the event the City disputes any such amounts invoiced, it shall pay all amounts not in dispute and notify the Contractor in writing of the amounts disputed and the reasons therefor.

4.4 No payment made shall constitute or be construed as final acceptance or approval of that part of the Services to which payment relates, or relieve the Contractor of any of its obligations outlined in this Contract. Further, the City shall not be deemed, by virtue of making payments to the Contractor hereunder, to have released the Contractor from any claim or liability, or to have waived any action arising out of the breach of this Contract by the Contractor.

5.0 REPORTS AND DRAWINGS

When the Contractor has been paid for the Services performed by him or her, all reports, drawings, and other material furnished to the City shall become the City's property and may be used by the City (or such parties as the City may designate) thereafter in such manner and for such proposes as the City (or such parties as the City may designate) may deem advisable, without further employment of or additional compensation to the Contractor. The Contractor shall not release or disclose any report, drawing, or other material furnished to the Contractor by the City in connection with the performance of the Contractor's Services

6.0 CONTRACTOR'S ACCOUNTING RECORDS

The Contractor shall keep records pertaining to Services performed (including complete and detailed time records) on the basis of recognized bookkeeping practices, generally accepted accounting principles, and in accordance with such reasonable requirements to facilitate audit as the City may provide. All records shall be available to the City or its authorized representatives for review and audit during normal business hours.

7.0 ASSIGNMENT/SUBCONTRACTING

The Contractor agrees that he will not sell, assign or transfer this Contract or any part thereof or interest therein without the prior written consent of the City.

8.0 REMEDY FOR DEFAULT

If the Contractor, in the sole judgment of the City, shall violate or fail properly to comply with or perform in any material respect any condition, provision, or warranty hereof, the City shall have the right by prior written notice to the Contractor to have the services called for hereby otherwise performed, and/or to terminate this contract without prejudice to any other rights or remedies of the City under this contract. The Contractor shall pay any excess in the City's cost to so procure the services and any related goods, supplies, materials or equipment. In addition, and without limiting any other remedies available to the City, the Contractor shall be liable for all losses, costs and expenses incurred by the City which result from the Contractors noncompliance.

9.0 SUSPENSION OR TERMINATION

9.1 The City shall have the right, upon seven (7) days written notice to the Contractor so stating, to terminate, suspend, or postpone this contract in whole or in part for any reason deemed by the City to be in the public interest. Any such termination, suspension, or postponement shall not give rise to any cause of action for damages against the City. In the event that the City postpones or suspends the Services, the Contractor's time for performance of the Services shall be extended for a period equal to the period of such postponement or suspension. In the event of termination, suspension or postponement, the City shall pay: (a) for services and any related goods, supplies, materials and equipment furnished up to the time of termination, suspension, or postponement at the contract price upon delivery; (b) for work in process in the amount of the Contractor's cost, determined in accordance with ordinary accepted accounting practices, up to the time of termination, suspension, or postponement; and (c) for raw materials purchased by the Contractor as of the date of termination, suspension, or postponement and which are noncancelable at the Contractor's actual cost plus reasonable handling charges, but only to the extent that such raw materials were purchased in reliance upon this contract and are useful solely with respect to this contract.

9.2 Upon receipt of a notice of termination, suspension, or postponement the Contractor shall immediately cease all work hereunder and cancel all orders placed with respect to this contract. The Contractor's failure to so cancel shall relieve the City of the obligations of paragraph 10.1 above.

9.3 The City may postpone, suspend or terminate the Services immediately, by notice, hand delivery or certified mail, if the Contractor violates any of the provisions of this Contract, or fails to perform or observe any of the terms, covenants or conditions of this Contract, or abandons in whole or in part its Services, or becomes unable to perform its Services.

9.4 In the event of termination of this Contract, the Contractor shall promptly deliver to the City all documents, work papers, calculations, computer programs, data, drawings, plans, and other tangible work product, or materials pertaining to the Services performed under this Contract to the time of termination.

10.0 NOTICE

Any action, notice or request required to be taken, given or made by City or the Contractor hereunder may be taken, given or made only by those persons identified for that purpose on the Contract Form. All notices required to be given hereunder shall be deemed properly given if personally delivered, or if mailed by registered or certified mail, postage prepaid addressed to the address and officer identified on the Contract Form.

11.0 PROTECTION OF PROPERTY

The Contractor shall take all reasonable precautions to prevent damage to property, visible and concealed, and shall restore to substantially the same condition existing prior to the Contractor's entry any disturbance or damage to property caused by the Contractor or any person acting under its control.

12.0 INSURANCE REQUIREMENTS

12.1 The Contractor shall provide insurance coverage as listed below. This insurance shall be provided at the Contractor's expense and shall be in full force and effect during the full term of this Contract.

WORKER'S COMPENSATION	
Worker's Compensation:	Per M.G.L. c.. l49, s. 34 and c.. l52 as amended.
GENERAL LIABILITY	
Personal Injury	$1,000,000 each occurrence
	$3,000,000 aggregate
Property Damage	$1,000,000 each occurrence
	$3,000,000 aggregate
VEHICLE LIABILITY	
Personal Injury	$1,000,000 each person
	$1,000,000 aggregate
Property Damage	$1,000,000

12.2 **The City shall be named as additional insureds on the Contractor's Liability Policies.**

12.3 The Contractor shall not commence the work until proof of compliance with this Section 13.0 has been furnished to the City by submitting one copy of a properly endorsed insurance certificate issued by a company authorized to write insurance in the Commonwealth. This certificate shall indicate that the contractual liability coverage is in force.

12.4 The Contractor shall file the original and one certified copy of all policies with the City within fifteen (15) days after contract award. If the City is damaged by the Contractor's failure to maintain such insurance and to so notify the City, then the Contractor shall be responsible for all reasonable costs attributable thereto.

12.5 Cancellation of any insurance required by this contract, whether by the insurer or the insured, shall not be valid unless written notice thereof is given by the party proposing cancellation to the other party and City at least thirty days prior to the effective date thereof, which shall be expressed in said notice.

13.0 CONFLICT OF INTEREST

No member, agent or employee of the City shall , during his/her tenure or one year thereafter directly or indirectly, have any interest in any property to be included in, or any contract for property, materials or services to be furnished or used in connection with, this contract or the proceeds thereof.

14.0 COMPLIANCE WITH LAWS

All work to be performed and wages paid under this specification shall be in accordance with all applicable laws, state or federal, and all applicable ordinances, codes, rules, and regulations of the City of Newton, or any public board or office having any jurisdiction, regulation or control over any work to be done hereunder, including minimum wage rates. In particular, without limitation, the Contractor agrees to comply with all regulations pertaining to approvals for federal and state grants, and with all federal and state environmental laws and regulations. The Contractor agrees to assist in making any submissions to federal or state agencies as may be required in order to meet the requirements in this paragraph.

15.0 INDEMNIFICATION

The Contractor agrees to indemnify and save the City harmless from and against any and all costs, losses, expenses, liabilities, damages or claims for damages, including reasonable attorney's fees and expenses, on account of any injury or damage to buildings, improvements, or property of the City or on account of any injury (including death) or damage to any person, persons, firm, corporation or association, or on account of any infringement or claim of infringement of patents, arising out of or resulting from the deliveries provided for or performed under this contract or from any act, omission or negligence of the contractor, his agents, employees, or assigns. The foregoing provisions shall not be deemed to be released, waived or modified in any respect by reason of any surety or insurance provided by the contractor under contract.

16.0 FORCE MAJEURE

The City may not hold the Contractor liable for any loss, expense or damage incurred by the City on account of failure of the Contractor to deliver services as specified herein, if that failure is caused by state of war, acts of enemies, expropriation or confiscation of facilities used by the Contractor, or compliance with any law, order, or regulation of any federal, state or municipal governmental authority, if the Contractor shall show that such compliance would impair this ability to perform a material provision of this contract, the Contractor having given the City reasonable notice of such cause.

17.0 DISPUTES

All claims, disputes and other matters in question between the City and the Contractor arising out of or relating to this Contract or the breach of it, shall be submitted for resolution to a court of competent jurisdiction in Massachusetts, unless otherwise agreed by the parties. No such action shall be brought, however, until the completion of all Services under this Contract or the earlier termination of this Contract as provided herein, the parties agreeing to negotiate any claims, disputes or other matters in question during the term of this Contract before resorting to litigation. As to all acts or failures to act by either party to this Contract, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events when the other party becomes aware or should have been aware of such acts or failure to act.

18.0 GOVERNING LAW

This contract shall be governed by and construed in accordance with Massachusetts Law.

19.0 LIABILITY

The Contractor is retained solely for the purpose of and to the extent set forth in this Contract. The Contractor’s relationship to the City for the purpose of services to be performed under this Contract shall be that of an independent contractor. The Contractor shall have no capacity or authority to involve the City in any contract or to incur any liability on behalf of the City. In no event shall the City be held liable as an employer or otherwise for any personal injury to or death of the Contractor’s principals, employees, agents and/or representatives occasioned by or resulting from the Contractor’s performance under this Contract.

20.0 LIENS

The Contractor shall cause to be removed from the property of the City any liens or other claims asserted by any person or entity claiming through or under the Contractor and arising out of Services performed under this Contract by such third party.

21.0 SEVERABILITY

In the event that any portion of this Contract is held illegal or unenforceable by a court of competent jurisdiction, the parties agree that such invalidity shall not affect the validity of the remaining portions of this Contract and Contractor and the City agree to substitute for the invalid provision a valid provision which most closely approximates the economics and intent of the invalid provision.

END OF SECTION

PUBLIC BUILDING MAINTENANCE CONTRACT
SUPPLEMENTAL CONDITIONS
COMMONWEALTH OF MASSACHUSETTS & CITY OF NEWTON

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SPECIAL CONDITIONS - COMMONWEALTH OF MASSACHUSETTS

Article 1. METHOD OF PAYING SUBCONTRACTORS

(General Laws, Chapter 30, Section 39F as most recently amended by Chapter 450, §76 of the Acts of 1996)

(1.) Every contract awarded pursuant to section forty-four A to L, inclusive, of chapter one hundred and forty-nine shall contain the following subparagraphs (a) through (i) and every contract awarded pursuant to section thirty-nine M of chapter thirty shall contain the following subparagraphs (a) through (h) and in each case those subparagraphs shall be binding between the general contractor and each subcontractor.

(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 the 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 the 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 form 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 a 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 for 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 the 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.

(i) If the subcontractor does not receive payment as provided in subparagraph (a) or if the general contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the subcontractor and the subcontractor does not receive payment for same when due less the deductions provided for in subparagraph (a), the subcontractor may demand direct payment by following the procedure in subparagraph (d) and the general contractor may file a sworn reply as provided in that same subparagraph. A demand made after the first day of the month following that for which the subcontractor performed or furnished the labor and materials for which the subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the general contractor. Thereafter the awarding authority shall proceed as provided in subparagraph (e), (f), (g) and (h).

Article 2. METHOD OF PAYING GENERAL CONTRACTORS

(General Laws, Chapter 30, Section 39K as most recently amended by Chapter 145 of the Acts of 1991 and Chapter 151 of the Acts of 1993.)

Every contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building by the commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount is more than five thousand dollars in the case of the commonwealth and more than two thousand dollars in the case of any county, city, town, district, board, commission or other public body, shall contain the following paragraph:--Within fifteen days (forty-five days in the case of the commonwealth, including local housing authorities) after receipt from the contractor, at the place designated by the awarding authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the awarding authority will make a periodic payment to the contractor for the work performed during the preceding month 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, less (1) a retention based on its estimate of the fair value of its claims against the contractor and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and less (3) a retention not exceeding five per cent of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five days after (a) the contractor fully completes the work or substantially completes the work so that the value of the work remaining to be done is, in the estimate of the awarding authority, less than one per cent of the original contract price, or (b) the contractor substantially completes the work and the awarding authority takes possession for occupancy, whichever occurs first, the awarding authority shall pay the contractor the entire balance due on the contract less (1) a retention based on its estimate of the fair value of its claims against the contractor and of the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, or based on the record of payments by the contractor to the subcontractors under this contract if such record of payment indicates that the contractor has not paid subcontractors as provided in section thirty-nine F. If the awarding authority fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days (twenty-four days in the case of the commonwealth) after receipt of such a periodic estimate from the contractor, at the place designated by the awarding authority if such a place is so designated. The contractor agrees to pay to each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

The awarding authority may make changes in any periodic estimate submitted by the contractor and the payment due on said periodic estimate shall be computed in accordance with the changes so made, but such changes or any requirement for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the amount of the periodic payment computed in accordance with the changes made, as provided herein; provided, that the awarding authority may, within seven days after receipt, return to the contractor for correction, any periodic estimate which is not in the

required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter. The provisions of section thirty-nine G shall not apply to any contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building to which this section applies.

All periodic estimates shall be submitted to the awarding authority, or to its designee as set forth in writing to the contractor, and the date of receipt by the awarding authority or its designee shall be marked on the estimate. All periodic estimates shall contain a separate item for each filed subtrade and each sub-subtrade listed in sub-bid form as required by specifications and a column listing the amount paid to each subcontractor and sub-subcontractor as of the date the periodic estimate is filed. The person making payment for the awarding authority shall add the daily interest provided for herein to each payment for each day beyond the due date based on the date of receipt marked on the estimate.

A certificate of the architect to the effect that the contractor has fully or substantially completed the work shall, subject to the provisions of section thirty-nine J, be conclusive for the purposes of this section.

Article 3. CLAIMS FOR UNFORESEEN CONDITIONS

(General Laws, Chapter 30, Section 39N as most recently amended by Chapter 774 of the Acts of 1972)

Every contract subject to section forty-four A of chapter one hundred and forty-nine or subject to section thirty-nine M of chapter thirty shall contain the following paragraph in its entirety and an awarding authority may adopt reasonable rules or regulations in conformity with that paragraph concerning the filing, investigation and settlement of such claims:

If, during the progress of the work, the contractor or the awarding authority 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 contracting authority may request an equitable adjustment in the contract price of the contract 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 a contractor, or upon its own initiative, the contracting authority 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 contract shall be modified in writing accordingly.

Article 4. CLAIMS FOR DELAY

(General Laws, Chapter 30, Section 390 as added by Chapter 116 of the Acts of 1973)

Every contract subject to the provisions of section thirty-nine M of this chapter or subject to section forty-four A of chapter one hundred forty-nine shall contain the following provisions (a) and (b) in their entirety and, in the event a suspension, delay, interruption or failure to act of the awarding authority increases the cost of performance to any subcontractor, that subcontractor shall have the same rights against the general contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the general contractor against the awarding authority, but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the general contractor or the subcontractor may have against each other.

(a) The awarding authority 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 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 general contractor must submit the amount of a claim under provision (a) to the awarding authority in writing, as soon as practicable after the end of the suspension, delay, interruption of 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 awarding authority shall not approve any costs in the claim incurred more than twenty days before the general contractor notified the awarding authority in writing of the act of failure to act involved in the claim.

Article 5. DECISIONS AND APPROVALS BY ENGINEER OR ARCHITECT

(General Laws, Chapter 30, Section 39P, as added by Chapter 1164 of the Acts of 1973)

Every contract subject to section thirty-nine M of this chapter or section forty-four A of chapter one hundred forty-nine which requires the awarding authority, any official, its architect or engineer to make a decision on interpretation of the specifications, approval of equipment, material or any other approval, or progress of the work, shall require that the decision be made promptly and, in any event, no later than thirty days after the written submission for decision; but if such decision requires extended investigation and study, the awarding authority, the official, architect or engineer shall, within thirty 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.

Article 6. PREFERENCE IN EMPLOYMENT, WAGES

(General Laws, Chapter 149 Section 26 as most recently amended by Chapter 665 of the Acts of 1986 and Chapter 552 of the Acts of 1991).

In the employment of mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works by the commonwealth, or by a county, town or district, or by persons contracting or subcontracting for such works, preference shall first be given to citizens of the commonwealth who have been residents of the commonwealth for at least six months at the commencement of their employment who are male veterans as defined in clause Forty-third of section seven of chapter four, and who are qualified to perform the work to which the employment relates; and secondly, to citizens of the commonwealth generally who have been residents of the commonwealth for at least six months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, and every contract for such work shall contain a provision to this effect. Each county, town or district in the construction of public works, or persons contracting or subcontracting for such works, shall give preference to veterans and citizens who are residents of such county, town or district. The rate per hour of the wages paid to said mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works shall not be less than the rate or rates of wages to be determined by the commissioner as hereinafter provided; provided, that the wages paid to laborers employed on said works shall not be less than those paid to laborers in the municipal service of the town or towns where said works are being constructed; provided, further, that where the same public work is to be constructed in two or more towns, the wages paid to laborers shall not be less than those paid to laborers in the municipal service of the town paying the highest rate; provided, further, that if, in any of the towns where the works are to be constructed, a wage rate or wage rates have been established in certain trades and occupations by collective agreements or understandings in the private construction industry between organized labor and employers, the rate or rates to be paid on said works shall not be less than the rates so established, provided, further that in towns where no such rate or rates have been so established, the wages paid to mechanics and apprentices, teamster, chauffeurs and laborers on public works, shall not be less than the wages paid to the employees in the same trades and occupations by private employers engaged in the construction industry. This section shall also apply to regular employees of the commonwealth or of a county, town or district, when such employees are employed in the construction, addition to or alteration of public buildings for which special appropriation of more than One Thousand Dollars are provided. Payments by employers to health and welfare plans, pension plans and supplementary unemployment benefit plans under collective bargaining agreements or understandings between organized labor and employers shall be included for the purpose of establishing minimum wage rates as herein provided.

Article 7. HOURS OF WORK

(General Laws, Chapter 149 Section 34 as most recently amended by Chapter 552 of the Acts of 1991).

Every contract, except for the purchase of material or supplies, involving the employment of laborers, workmen, mechanics, foremen or inspectors, to which the commonwealth or any county or town, subject to section thirty, is a party, shall contain a stipulation that no laborer, workman, mechanic, foreman or inspector working within the commonwealth, in the employ of the contractor, subcontractor or other person doing or contracting to do the whole or a part of the work contemplated by the contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in case of emergency, or, in case any town subject to section thirty-one is a party to such a contract, more than eight hours in any one day, except as aforesaid, provided, that in contracts entered into by the department of highways for the construction or reconstruction of highways there may be inserted in said stipulation a provision that said department, or any contractor or subcontractor for said department, may employ laborers, workmen, mechanics, foremen and inspectors for more than eight hours in any one day in such construction or reconstruction when, in the opinion of the commissioner of labor and industries, public necessity so requires. Every such contract not containing the aforesaid stipulation shall be null and void.

Article 8. WORK BY FOREIGN CORPORATIONS

(General Laws, Chapter 30 Section 39L, as most recently amended by Chapter 3 of the Acts of 1967).

The Commonwealth and every county, city, town, district, board, commission or other public body which, as the awarding authority, requests
proposals, bids or subbids for any work in the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or other public works (1) shall not enter into a contract for such work with, and shall not approve as a subcontractor furnishing labor and materials for a part of any such work, a foreign corporation which has not filed with such awarding authority a certificate of the state secretary stating that such corporation has complied with sections three and five of chapter one hundred and eighty-one and the date of such compliance, and (2) shall report to the state secretary and to the department of corporations and taxation 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.

END OF SUPPLEMENTAL CONDITIONS

BUILDING MAINTENANCE SERVICE CONTRACT

SPECIAL CONDITIONS

The following provisions supplement the General Conditions of the Contract for Non-Technical Services. In the event of conflict or discrepancy between the General Conditions and these Special Conditions, the provisions of the Special Conditions shall govern.

1.0 SUMMARY OF WORK

A. The Work under the Contract consists of:

1. Furnishing all labor, materials, tools, equipment and supervision necessary to accomplish the work described herein,in accordance with all specifications and requirements of the Project Manual.

2. All work either shown on the Drawings (if any) or included in the specifications unless specifically indicated as not to be done.

B. In addition, the work under the Contract includes:

1. Work outside the Project Site as called for in the Contract Documents and as required for the performance of the Work.

2. The restoration of any items damaged or destroyed by encroaching upon areas outside the Project Site.

3. Providing and restoring, where appropriate, all temporary facilities.

C. The Proposed Contract Price shall be complete costs, including overhead, profit, insurance, transportation, and all other costs connected with, or incidental to, the work described.

2.0 PROJECT SITE

A. The areas of work for this contract shall be various buildings within the City of Newton as specified on Work Orders to be issued from time to time during the term of this Contract.

3.0 NOTICE TO PROCEED/FAILURE TO COMMENCE WORK

A. From time to time during the term of this Contract, the Contractor shall be issued notice to proceed in the form of a written Work Order issued by the Public Building Department listing specific work items to be performed in accordance with this Contract. The Contractor shall commence performance of the work within the time specified in the Work Order, and in no event within less than the time limits stated in the Work Specifications contained in the Project Manual.

B. In the event the contractor fails to commence performance within the specified time, and/or notifies the City of its inability to do so, the City shall call upon the second Contractor awarded pursuant to this bid (if any) to perform the required work.

C. In the event the second Contractor awarded pursuant to this bid is unable to commence performance within the required time, or if there is no second Contractor, the City reserves the right to contract for the work on the open market at the then prevailing rate and to deduct from any monies due or that may thereafter become due to the contractor the difference between the price stated for the work in the contract and the actual cost thereof to the City.

D. In the event of Contractor’s repeated failure to commence work within the time required by these specifications, the City shall exercise all provisions contained in the General Conditions regarding default, suspension or termination of this contract.

4.0 PAYMENT

A. Once each month, on a date estabished by the City, the Contractor may submit an Application for Payment (Invoice) for the work performed during the preceeding month. The Contractor may invoice for all Work Orders completed and accepted during the preceeding month, and for all Work Orders either partially completed or not yet accepted by the City.

B. Upon receipt of the Application for Payment, the City will, within fifteen days, make payment in full for all Work Orders completed and accepted during the preceeding month. For Work Orders partially completed or not yet accepted, the City will make payment for the value of the Work Order completed during the preceeding month, less a retainage of 5% of the estimated total of the Work Order. The City will make final payment for partially completed Work Orders, including any retained amounts, upon completion and acceptance of the work and receipt of an Application for Payment at the end of the month in which the work is completed and accepted.

5.0 COMMUNICATIONS

A. All notices, demands, requests, instructions, approvals and claims must be in writing.

B. Any such notice shall be deemed to have been given as of the time of delivery, or of actual receipt in the case of telegrams or, in the case of mailing, when it should have been received in due course of post.

C. For communicating purposes, the office address of the Contractor shall be that stated on the signature page of the contract; that of the City shall be as stated in the Invitation for Bids. Any subsequent change in address of either party shall be communicated to the other in writing.

6.0 PLANS AND SPECIFICATIONS

A. The City will furnish to the Contractor, without charge, all copies of the specifications reasonably necessary in the performance of the contract work.

7.0 COORDINATION

The Contractor shall:

A. Supply to the City the name and telephone number of a responsible person who may be contacted during off-hour emergencies during the term of the Contract.

B. Cooperate at all times with the City and the Project Manager, and ensure the cooperation of his key personnel and that of his subcontractors.

8.0 CONDUCT OF THE WORK

A. The work must be completed in a continuous uninterrupted operation. The Contractor must use sufficient workforce and adequate equipment to complete all the necessary work requirements within a minimum period of time.

B. The work shall be conducted between the hours of 8:00 a.m. and 5:00 p.m. on Monday through Friday. No work shall be done on holidays, Saturdays or Sundays except as specifically requested and authorized by the City.

C. Under no circumstances will the contractor be paid at a premium or overtime rate for any work performed without the express advance authorization of the City.

D. The Contractor is responsible for the security of partially completed work until the project is finally accepted by the City.

9.0 ALTERATION

A. The Contractor shall patch, repair and/or replace all existing materials and surfaces remaining exposed after installation of new work which have been affected by alteration or removal of existing work. All patch and repair work shall match existing.

10.0 GENERAL DIRECTIONS

A. Damage to Persons and Property

Any damage to buildings, roads, public roads, bituminous concrete areas, fences, lawn areas, trees, shrubbery, electric or telephone poles, underground utilities, etc., shall be repaired by the Contractor at his own expense. Damaged property shall be returned to its original condition prior to the damages within a reasonable time period, except all utility outages shall be repaired immediately.

B. Protection of Persons and Property

The Contractor shall, at all times, leave an unobstructed way along the roadways and walks, and shall maintain barriers and lights for the protection of all persons and property in all locations where he has materials stored or work going on, and during the entire time such work is going on or material is stored.

C. Shutdown of Services

The Contractor's attention is especially called to the fact that continuous operation of building utilties and services is mandatory. During the period of construction of the new work and/or alterations to the existing work, the progress and sequence of installation shall be carefully planned and approved by the City. If any building is to be left without heat, hot water, city water, electricity, gas, sanitary facilities, or any other services, the Contractor shall provide reasonable written notice to the City before proceeding.

D. Care of Work

All work is to be carefully protected so that no injury will come to it from water, frost, accident, or any other cause and any injury which may come to any of the work shall be repaired immediately by the Contractor at his own expense and without additional cost to the City. This shall also apply to any abutting or adjoining work on premises. The Contractor shall be responsible for any damage and in the event of such damage, the Contractor shall repair the damage immediately at his own cost and without additional cost to the City.

E. Removal of Debris

Debris of any nature shall be completely removed from the site at the end of each days work and disposed of in accordance with all Federal, State and local regulations.

F. The Contractor is responsible for the security of all work until it is accepted by the City.

11.0 TEMPORARY UTILITIES

A. Prior to execution of the Work, the Contractor shall confer with a representative of the Public Building Department regarding the use of utilities and facilities at the worksite. No City utilities or facilities are to be used by the Contractor in the performance of this Contract without the prior approval of the City.

12.0 SUBMISSION OF PAYROLLS

A. The Contractor shall, with each invoice submitted during the term of this Contract, submit to the City two (2) legible copies of his payrolls documenting the wages paid to all employees performing on site labor relating to the work of this Contract. These copies shall be prepared on forms supplied by the City.

13.0 DRAWINGS (IF APPLICABLE)

A. The drawings attached herein and such drawings as may be issued per addendum, shall constitute an integral part of this section and shall serve as the working drawings.

B. Drawings shall not be scaled. Field verification is directed since actual locations, dimensions and levels are existing.

C. All items not specifically mentioned in the specifications or noted on the drawings, but which are obviously necessary to make a complete working installation, shall be included.

14.0 MATERIALS

A. Unless specifically so stated to the contrary the use of a manufacturer's name or style number is not restrictive, and is intended solely as an identification of the type and quality of the materials and services required. In all cases, the words “or approved equal” if not inserted are implied.

B. An item equal to that named or described in the specifications may upon written approval of the City be furnished by the Contractor. An item shall be considered equal to the item so named or described if (1) it is at least equal in quality, durability, appearance, strength and design; (2) it will perform at least equally the function imposed by the general design for the public work being contracted for or the material being purchased; (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the specifications.

C. The name and identification of all materials other than the one specifically named shall be submitted to the City in writing for approval, prior to purchase, use or fabrication of such items. Approval shall be at the sole discretion of the City, shall be in writing to be effective, and the decision of the City shall be final. The City may require tests of all materials so submitted to establish quality standards at the Contractor’s expense.

D. For the use of material other than the one specified, the Contractor shall assume the cost of and responsibility for satisfactorily accomplishing all changes that may be required in the work as shown. All directions, specifications and recommendations by manufacturers for the installation, handling, storing, adjustment, and operation of their equipment shall be complied with and responsibility for proper performance shall continue to rest with the Contractor.

E. The Contractor shall not have any right of appeal from the decision of the City condemning any materials furnished if the Contractor fails to obtain the approval for substitution in accordance with these provisions. If any substitutuin is more costly, the Contracotr shall pay for such costs

15.0 WARRANTY AND INDEMNIFICATION

A. In addition to other guarantees or warranties required under law or other sections of the specification, the Contractor warrants all materials furnished and labor performed under this Contract to be free from defects or errors in workmanship or installation for a period of one year from the date of Completion of the work, as certified by the Project Manager. The Contractor shall indemnify the Authority for the full cost of any damage to the property that may result by reason of such defects or errors and shall indemnify the Authority from and against any and all claims, demands. losses, costs, expenses, liabilities and damages, including reasonable attorney's fees and expenses, arising out of or on account of this Contract, including but not limited to claims brought against the Authority for alleged infringement of patents based upon any methods of construction or application of materials furnished under the Contract.

B. The Contractor shall indemnify, hold harmless and defend the City and its departments, officers, employees, servants, and agents from and against all actions, causes of actions, claims, demands, damages, costs, loss of services, expenses and compensation, including attorney’s fees and interest arising out of or resulting directly or indirectly from the services rendered pursuant to this Contract, provided that any such action, cause of action, claim, demand, damage, cost, loss of service, expense, compensation (1) in any way grows out of bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, which (2) is caused in whole or in part by any act or omission of the Contractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

END OF SECTION

CITY OF NEWTON

MINORITY/ WOMEN BUSINESS ENTERPRISE PLAN

DECEMBER 1, 1999

STATEMENT OF POLICY:

Whereas it is the policy of the government of the United States of America, the Commonwealth of Massachusetts and the City of Newton that no person shall be discriminated against in any manner whatsoever on the grounds of race, religion, color, sex, handicap or national origin; and

Whereas, it is the policy of the government of the United States of America that no person shall, on the grounds of race, color, sex or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program of activity funded entirely or in pail by the City, the State or Federal government; and

Whereas, it is the policy of the government of the United States of America to encourage that Minority/Women Business Enterprises shall have the maximum practicable opportunity to participate in Federal and State assisted projects; and all City funded contracts; and

Whereas, it is the policy of the City of Newton to encourage that minority/women business enterprises shall have the maximum practicable opportunity to participate in all City funded contracts; and

Whereas, the City of Newton, as a recipient of Federal and State funds subscribes to the above policies and will fully comply With Federal, State and local laws and directives governing non-discrimination, equal opportunity and affirmative action in all municipal activities; and

Whereas, to further enunciate the equal opportunity policy of the City of Newton's Minority/Women Business Program, the following responsibilities are specified

> This MINORITY/ WOMEN Business Enterprise Plan sets forth the administrative standards for the further implementation of the City of Newton's policy of the utilization of minority contractors and subcontractors.
>
> The City of Newton strongly affirms that it will not discriminate in any contractual procedures against any persons because of race, color, religion, age, disability, sex or national origin. This policy shall be administered with a positive supportive attitude.
>
> It is the responsibility of the City of Newton to take affirmative steps to implement this policy to insure equality of opportunity in conducting the Program including notifying those persons and businesses doing business with the City, that contracts for goods, services and construction, shall be made Without reference or regard to race, color, sex, age, handicap, religion or national origin.

Setti D. Warren Mayor

CITY OF NEWTON
MINORITY/ WOMEN BUSINESS ENTERPRISE PLAN

DECEMBER 1, 1999

I. DEFINITIONS:

A. Minority Person- the term includes a person who is of Black Hispanic, Asian, American Indian or Cape Verdean origin.

B. Minority Business Enterprise (MBE) -- the term shall mean a business a) that is certified by SOMWBA; or b) 1 provides evidence satisfactory to the City's Affirmative Action Officer that it is a business owned or controlled by one or more of the following:

- an individual who is a minority person,
- a partnership or joint venture controlled by minority persons in which at least 51 % of the ownership interest is held by minority persons or,
- a corporation or other entity controlled by minority persons and in which at least 51 % of the stock is owned by one or more minority persons.

C. Contract Compliance Officer - the Chief Procurement Officer or his/her designee responsible for the implementation of Newton's Minority/Women Enterprise Plan ("MWBE Plan") and activities.

D. MCAD - Massachusetts Commission Against Discrimination.

E. SOMWBA -- State Office of Minority/Women Business Assistance,

F. City - The City of Newton.

G. Women Business Enterprise (WBE) - the term shall mean a business a) that is certified by SOMWBA; or b) provides evidence satisfactory to the City's Affirmative Action Officer that it is a business owned or controlled by one or more of the following:

- an individual who is a woman.
- a partnership or joint venture controlled by women in which at least 51% of the ownership interest is held by women, or
- a corporation or other entity controlled by women and in which at least 51% of the stock is owned by one or more women.

H. MWBE – Minority or Women Business Enterprise

II. GOALS:

Newton's Minority/Women Enterprise Plan ("MWBE Plan") shall be guided by the goals presented below to promote minority/women opportunities within the City.

These goals comprise the framework for those activities to be implemented as part of the MWBE Plan:

To take affirmative action in expanding opportunities for minority and women owned firms in obtaining contracts within the City of Newton.

To assure that all contractors, regardless of race color, religion, creed, national origin, sex, age, ancestry or handicap, shall have equal opportunity to City contracting activities.

To award, of the total annual City contract dollars expended, 10 percent to MBE and 5 percent to WBE for construction; for goods and services, 5 percent WBE and 5 percent MBE.

III. SOLICITATION ACTIVITIES:

To notify MWBEs of upcoming contracts for construction, professional services and supplies, funded in whole or in part with Federal, State, and City funds, the following activities will be undertaken. In addition on a regular basis, the City of Newton will distribute to its listing of MWBEs and SOMWBA, a summary of upcoming contract opportunities which are subject to the City's MWBE Plan.

A. Construction Contracts

All construction contracts with an estimated value over $50,000 will be formally advertised within local, regional, minority and special interest publications at least 14 days prior to the bid opening date.

For all such construction contracts a "Notice of Solicitation" of a project going out to bid will be distributed to appropriate SOMWBA or City certified firms at least 14 days prior to the bid opening date.

B. Contracts for Professional Services

The City of Newton will send notification of its advertised Request for Proposals to appropriate! SOMWBA or City certified firms Responding MWBE firms will be considered for contract award within the bounds of generally accepted management practice or with the applicable procurement law relating to securing the lowest cost and best services available.

C. Procurement of Supplies

The City of Newton will (where feasible) utilize MWBEs for the procurement of supplies in accordance with City purchasing procedures. These efforts will be documented and reported to MCAD, and the Mayor's office on a quarterly basis.

IV. CONSTRUCTION ACTIVITIES:

A. Goals

The City of Newton bid documents and contracts with an estimated value over $50,000 will contain the City's goal of 10% for MBE and 5% for 'WBE utilization for subcontracts,

B. Pre-Bid Conference

To affirmatively further the opportunities available to prospective bidders, the City will hold a pre-bid conference 5-7 days prior to the bid opening date for all City construction contracts and subcontracts with an estimated value over $50,000.

The pre-bid conference will provide an opportunity for contractors to: review and clarify the technical requirements of the projects, review the City's MWBE Plan; and review Equal Opportunity requirements. The City will advertise this conference and extend invitations to interested contractors as part of the notice of solicitation.

C. Bid Submission

All bids for City of Newton contracts with -an estimated value over $50,000 shall include a certification of intent to be completed by the bidder swing his/her intent to comply with the City's MWBE Plan. Failure to include this certification shall be an informality which may be waived if such certification is received prior to the award of the contract.

D. Contract Execution

Upon notification of award of the contract, the bidder shall provide a written plan detailing how it will comply with the MWBE Plan

E. Monitoring

Throughout the duration of the contract, the City of Newton through its Contract Compliance Officer, will monitor the progress and activities of all contractors and subcontractors as they attempt to comply with the MWBE Plan.

F. Enforcement

In the case of clear neglect to make a good faith effort to comply with this MWBE Plan, the City of Newton reserves the right to designate contractor, after a hearing, as ineligible for future City bid awards.

V. CONTRACT COMPLIANCE OFFICER/DUTIES AND RESPONSIBILITIES:

The Contract Compliance Officer, as liaison between minority firms and the City of Newton will have the overall responsibility for the implementation of Newton's MWBE Plan. This responsibility includes the development, management, dissemination of information; the provision of technical assistance to minority firms including clarification of procedures to be implemented; maintenance of relevant documentation; completion of reporting requirements; and performance of monitoring and evaluation activities; and maintenance and updating of listings of minority/women business.

The Contract Compliance Officer has oversight of all City procurements for construction, professional services and supplies and shall coordinate the implementation of the MWBE Plan with other City departments.

THE CITY OF NEWTON, MASSACHUSETTS
SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY
ANTI-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM

I. The requirements hereinafter set forth apply to construction contracts which involve an expenditure by the City of $50,000 or more.

II. For purposes of this contract "minority" refers to Asian Americans, Black, Hispanics American Indians and Cape Verdeans. The City refers to the- City of Newton

III. During the performance of this contract the Contractor and all of (his) 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: layoff; termination; rates of pay or other forms of compensation; conditions or privileges of employment; and the selection of apprenticeship. The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the City setting forth the provisions of the Fair Employment Practices Law of the Commonwealth (MGL Chapter 151B) . (See Attachment A)

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 the 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 employment: opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, 'Layoff or termination, rate of compensation, and in-service or apprenticeship training programs. This affirmative action shall. include all action required to guarantee equal employment opportunity for all persons, regardless of 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 City public construction projects

IV.

1. As part of this obligation of remedial action under the foregoing section, the contractor shall maintain on this project a not less than 5 percent ratio of minority employee man hours 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 the Contractor's affirmative action program approved by the City, traditional referral methods utilized by the construction industry, and referrals from agencies, not more than three in number at any one Lime, designated by the Liaison Committee or the City.

V.

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 the Compliance Officer and one representative each from the Departments administering this project, hereinafter called the administering Departments, and such other representatives as may be designated by the City.

2. The Contractor (or, his/her agent, if any, designated by him/her as the onsite equal employment opportunity officer) shall recognize the Liaison Committee as the affirmative action body, and shall establish a continuing working relationship with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.
3. The Contractor shall prepare manning tables on a quarterly basis.* These shall be broken down into projections, by week, for workers required in each trade. Copies shall be furnished one week in advance of the initiation of work and quarterly thereafter to the City and to the 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 City of hours worked in each trade by each employee, identified as minority or non-minority. Copies of these reports shall be provided at the end of each week to the City and to the Liaison Committee.

* If job is less than three months, prepare for length of job.

VI. If the Contractor shall use any sub contractor on any work performed under this contract, he/she shall Lake 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 State Office of: Minority *Business Assistance* or As designee, while bids are in preparation, of all products, work or services for which the Contractor intends to negotiate bids.

VII. In the employment of journeyman, apprentices, trainees, and advanced trainees, the Contractor shall give preference to citizens of the Commonwealth who have served in the armed forces of the United States in time of 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 numbers, then to citizens of the United States

VIII. A designee of the City and a designee of the Liaison Committee shall each have the right of access no the Construction site,

IX. **Compliance with Requirements**

The Contractor shall comply with the provisions of Chapter 151B of the Massachusetts General Laws, which are herein incorporated by reference and made as amended by Executive Order 227, 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.

X. **Non-Discrimination**

The Contractor, in the performance of all work after award, and prior to completion of the contract work, will not discriminate on the grounds of race, color, religious creed, national origin, age or sex in employment practices, in the selection or retention of sub-contractors, or in the procurement of materials and rentals of equipment.

XI. **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 his contract relative to non-discrimination and affirmative action.

XII. **Bidders Certification Requirement**

1. The following certification statement will be inserted in the bid document just above the bidder's signature.

"The bidder hereby certifies he shall comply with tile minority manpower ratio and specific action steps contained in the City of Newton, Massachusetts Supplemental Equal Employment--Opportunity Anti-Discrimination and Affirmative Action Program. The Contractor receiving the award of the contract 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 City of Newton Massachusetts Supplemental Equal Employment Opportunity Anti -Discrimination and Affirmative Action Program.

XIII. **Contractor's Certification**

A Contractor's' certification form must be signed by all successful low bidders prior to award by the City. A Contractor shall not be eligible for award of a contract unless the contractor has executed and submitted the Contractor's Certification, which shall be deemed a part of the resulting contract. (See Attachment B)

XIV. **Subcontractor's Certification**

Prior to the award of any subcontract, regardless of tier, the prospective subcontractor must execute and submit: to the Prime Contractor a subcontractor's certification setting forth the subcontractor's compliance with this program, which shall be deemed a part of the resulting subcontract. (See Attachment C)

XV. Compliance - Information, Reports and Sanctions

1. The Contractor will provide all information and reports Required by the administering department or, the City on instruction 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 City to affect the employment of personnel. This provision shall apply only to information pertinent to the City's 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 department or the City as appropriate and shall set forth what efforts he/she has made to obtain the information.

2. Whenever the administering department, the City, or the Liaison Committee believes the General Contractor or any Subcontractor may not-, be operating in compliance with the terms of this Section, the City directly, or through its designated agent, shall conduct: an appropriate investigation, and may confer with the parties, to determine if such Contractor is operating in compliance with the terms of this Section. If the City or its agent finds the General Contractor or any Subcontractor not in compliance, it shall make a preliminary report on non-compliance, and notify such Contractor in writing of such steps as will in the judgement of the City or its agent bring such Contractor into compliance. In the event. that such Contractor fails or refuses to fully perform such steps, the City shall make a final report of non-compliance, and recommend to the administering department the imposition of one or more of the sanctions listed below. If, however, the City 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 at the receipt of the recommendations of the City, the administering department 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 department from the General Contractor of 1/100 of 11 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 department from the General Contractor, to be assessed by the General Contractor as a back charge against the Subcontractor, of 1/10 of 1% of the sub-contract 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 of 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 specified time his/her compliance with the terms of the City's affirmative action construction contract requirements; OR,

   (d) The denial to the General Contractor or any Subcontractor of the right to participate in any future contracts awarded by the administering department for a period of up to three years.

3. If at any time after the imposition of one or more of the above sanctions (unless the contract. has been terminated), a Contractor is able to demonstrate that he/she is in compliance with this section, he/she may request the City to suspend the sanctions conditionally pending a final determination by the City as to whether the Contractor is in compliance. Upon final determination of the City, the administrating department, based upon the recommendation of the City, shall either lift the sanctions or continue them.

4. Sanctions enumerated under Section XV shall not: be imposed by the City except after the General Contractor or Subcontractor have had an opportunity for full and fair hearing with City. The non-compliance investigation shall be initiated without prior notice to the contractor. Any sanctions to be imposed shall be, _set forth fully and completely in writing, and may then be appealed to t-he City in writing by 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.

FAIR EMPLOYMENT LAW

The Fair Employment Law declares that it is illegal to discriminate on the basis of race, color, religious creed, national origin, sex, sexual orientation, age, ancestry or disability

IT IS UNLAWFUL:

- to print or circulate any advertisement or use any application form which directly or indirectly specifies any limitation on the basis of race, color, religious creed, national origin, sex, sexual orientation, age, ancestry or disability.
- to discharge or refuse to hire arty individual on file basis of their race, color, religious creed, national origin, sex, sexual orientation, age, ancestry, or disability.
- to discriminate against any individual in matters relating to compensation, terms, conditions, or privileges of employment because of their race, color, religious creed, national origin, sex, sexual orientation, age, ancestry or disability.
- to require a woman to leave her job at some arbitrary stage in her pregnancy or to refuse to let her return to work until a specified time set by the employer.
- to grant a female employee at least eight weeks leave for purposes of childbirth or to treat her absence differently than any other absence due to disability.
- to require an employee to remain at work during any day or part thereof that s/he observes as a religious holiday provided that the employee gives a ten-day notice and the absence does not cause undue hardship to the employer.
- to discharge or refuse to hire any person because of their failure to furnish information concerning admission to a center for the treatment of mentally ill persons.
- to discriminate against a job applicant for failure to furnish information, written or oral, concerning.- A) an arrest, detention or disposition regarding a violation of law in which no conviction resulted; B) a first conviction for any of the following misdemeanors: driving under the influence, simple assault, speeding, minor traffic violations, disturbance of the peace; or C) conviction for a misdemeanor where the date of the conviction or end of period of incarceration, if any, occurred more than five years prior to the employment application, and the applicant has not been convicted of any offense within the five years immediately before the date of application.

RETALIATION

It is illegal to retaliate against any person because s/he has opposed any practices forbidden under this Chapter or because s/he has filed a complaint, testified, or assisted in any proceeding before the Commission. It is also illegal to aid, abet, incite, compel or coerce the doings of any of the acts forbidden under this Chapter or to attempt to do so.

SEXUAL HARASSMENT

151B:1,18 The term "sexual harassment" shall mean sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when (a) submission to or rejection of such advances, requests or conduct is made either explicitly or implicitly a term or condition of employment, or as a basis for employment decisions: (h) such advances,, requests or conduct have the purpose or effect of unreasonably interfering with an individual's work performance by creating an intimidating, hostile, humiliating or sexually offensive work environment.

COMPLAINTS

All complaints must be filed in writing. Information on the filing of complaints can be obtained by contacting the MASSACHUSETTS COMMISSION AGAINST DISCRIMINATION at the following locations:

Boston office:
One Ashburton Place
Room 601
Boston, MA 02108
(617) 727-3990

Springfield office:
436 Dwight Street
Suite 315
Springfield, MA 01103
(4 13) 739-2145

THE MASSACHUSETTS COMMIISSION AGAINST DISCRIMINATION

Attachment B

CITY OF NEWTON

Contractors Certification

A Contractor will not be eligible for award of a contract, unless such contractor has submitted the following certification, which is deemed a part of the resulting contract.

CONTRACTOR'S CERTIFICATION

_____Certifies that:
Contractor's Name

it tends to use the following listed construction trades in the work under the contract

_____ and

2. will comply with the minority manpower ration and specific affirmative action steps contained herein; and

3. will obtain from each of its subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this contract the subcontractor certification required by these bid conditions

_____
(Signature of authorized representative of Contractor)

Any contract for the provision of goods or services to the City of Newton or any of its departments is subject to the ordinance creating the Human Rights Commission, as it may be amended from Time to Time. Any complaints within the purview shall be forwarded immediately to the contracting agency, and a copy shall be sent to the Human Rights Commission; any complaints received by the contracting agency shall be forwarded to the contractor, and a copy shall be sent to the Human Rights Commission.

Attachment C

CITY OF NEWTON

Subcontractors Certification

Prior to the award of any subcontract, regardless of tier, the prospective subcontractor must execute and submit to the Prime Contractor the following certification, which will be deemed a part of the resulting subcontractor.

SUBCONTRACTOR`S CERTIFICATION

_____Certifies that:
Contractor's Name

it tends to use the following listed construction trades in the work under the contract

_____ and

will comply with the minority manpower ration and specific affirmative action steps contained herein; and

will obtain from each of its subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this contract the subcontractor certification required by these bid conditions

Pursuant to M.G.L. Ch. 62C, Sec. 49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

_____
(Signature of authorized representative of Contractor)

In order to ensure that the said subcontractor's certification becomes part of all subcontracts under the prime contract, no subcontract shall be executed until an authorizee representative of the Administrative Agency administering this project has determined in writing, that the said certification has been incorporated in such subcontract, regardless of tier, Any subcontract executed without such written approval shall be void.

Any contract for the provision of goods or services to the City of Newton or any of its departments is subject to the ordinance creating the Human Rights Commission, as it may be amended from Time to Time. Any complaints within the purview shall be forwarded immediately to the contracting agency, and a copy shall be sent to the Human Rights Commission; any complaints received by the contracting agency shall be forwarded to the contractor, and a copy shall be sent to the Human Rights Commission.

END OF SECTION

CITY OF NEWTON

WAGE RATE REQUIREMENTS

1. GENERAL

A. This section summarizes the requirements for the payment of wages to laborers and mechanics employed under the Contract.

B. Other duties and requirements of law which may not be specified in this section apply and are inherently a part of the Contract.

2. WAGE RATES

A. The rate per hour to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the Work shall not be less than the rate of wages in the attached "Minimum Wage Rates" as determined by the Commissioner of Labor and Industries. The schedule of prevailing wage rates will be updated annually for all public construction projects lasting longer than one (1) year. The contractor shall pay the prevailing wage rate set out in the applicable prevailing wage rate schedule. Increases in prevailing wage rates shall not be the basis for a change order.

B. Keep posted on the site a legible copy of said schedule. Keep on file the wage rates and classifications of labor employed on this Work in order that they may be available for inspection by the Owner, Administrator, or the Architect.

C. Apprentices employed pursuant to this determination of wage rates must be registered and approved by the State Apprenticeship Council wherever rates for journeymen or apprentices are not listed.

D. Pay reserve police officers employed on the Work the prevailing rate of wages paid to regular police officers as required by M.G.L. c149, Sec. 34B, as amended. Such police officers shall be covered by Workmen's Compensation Insurance and Employers Liability Insurance by the Contractor.

E. The Contractor and all subcontractors shall, on a weekly basis throughout the term of the contract, provide to the City of Newton certified payroll affidavits verifying compliance with M.G.L. c.149, Sec. 27, 27A and 27B.

F. The Contractor and all subcontractors shall provide a Statement of Compliance within 15 days of the completion of its portion of the work. This statement shall be submitted to the Owner on the form found elsewhere in this section.

G. The Contractor shall maintain accurate and complete records, including payroll records, during the Contract term and for three years thereafter.

END OF SECTION

The Massachusetts Prevailing Wage Law
M.G.L. ch. 149, §§ 26 – 27

NOTICE TO AWARDING AUTHORITIES

- 'The enclosed wage schedule applies only to the specific project listed at the top and will be updated for any public construction project lasting longer than one (1) year.
- 'You should request an updated wage schedule from the Division of Occupational Safety if you have not opened bids or selected a contractor within 90 days of the date of issuance of the enclosed wage schedule.
- 'The wage schedule shall be incorporated in any advertisement or call for bids for the project for which it has been issued.
- 'Once a contractor has been selected by the awarding authority, the wage schedule shall be made a part of the contract for that project.

NOTICE TO CONTRACTORS

- The enclosed wage schedule, and any updated schedule, must be posted in a conspicuous place at the work site during the life of the project.
- The wages listed on the enclosed wage schedule must be paid to employees on public works projects regardless of whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
- The enclosed wage schedule applies to all phases of the project including the final clean-up. Contractors whose only role is to perform final clean-up must pay their employees according to this wage schedule.
- All apprentices must be registered with the Massachusetts Division of Apprentice Training in order to be paid at the reduced apprentice rates. If a worker is not registered with the Division of Apprentice Training, they must be paid the “total rate” listed on the wage schedule regardless of experience or skill level. For further information, please call (617) 727-3486 or write to the Division of Apprentice Training, 399 Washington Street, 4th Floor, Boston, MA 02108

WEEKLY PAYROLL RECORDS REPORT
& STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided. A Payroll Form has been printed on the reverse of this page and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

In addition, every contractor and subcontractor is required to submit a copy of their weekly payroll records to the awarding authority. This is required to be done on a weekly basis. Once collected, the awarding authority is also required to preserve those records for three years.

In addition, each such contractor, subcontractor or public body shall furnish to the Department of Labor & Workforce Development/Division of Occupational Safety within fifteen days after completion of its portion of the work a statement, executed by the contractor, subcontractor or public body who supervises the payment of wages, in the following form:

STATEMENT OF COMPLIANCE

_____, 201_____

I,_____,_____
(Name of signatory party) (Title)
do hereby state:
That I pay or supervise the payment of the persons employed by
_____ on the _____
(Contractor, subcontractor or public body) (Building or project)
and that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty nine of the General Laws.

Signature _____

Title _____

DIVISION OF OCCUPATIONAL SAFETY, 399 WASHINGTON STREET, 5TH FL., BOSTON, MA. 02108

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

JOANNE F. GOLDSTEIN
Secretary of Labor and Workforce Development

GEORGE E. NOEL
Director of Labor

HEATHER E. ROWE
Acting Commissioner of
Division of Occupational Safety

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

Awarding Authority: City of Newton

Contract Number: 11-50 **City/Town:** NEWTON

Description of Work: High School CCTV System Installation Works - Supply, Deliver and Installation of CCTV Systems at Newton North High School and Newton South High School

Job Location: Various Locations

Classification	Effective Dates and Total Rates					
Construction						
(2 AXLE) DRIVER - EQUIPMENT	12/01/2010	$45.530	06/01/2011	$46.280	12/01/2011	$46.940
	06/01/2012	$47.590	12/01/2012	$48.620		
(3 AXLE) DRIVER - EQUIPMENT	12/01/2010	$45.600	06/01/2011	$46.350	12/01/2011	$47.010
	06/01/2012	$47.660	12/01/2012	$48.690		
(4 & 5 AXLE) DRIVER - EQUIPMENT	12/01/2010	$45.720	06/01/2011	$46.470	12/01/2011	$47.130
	06/01/2012	$47.780	12/01/2012	$48.810		
ADS/SUBMERSIBLE PILOT	08/01/2010	$104.640	08/01/2011	$108.760		
AIR TRACK OPERATOR	12/01/2010	$49.850	06/01/2011	$50.850	12/01/2011	$52.100
ASBESTOS REMOVER - PIPE / MECH. EQUIPT.	12/01/2009	$40.250				
ASPHALT RAKER	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE	12/01/2010	$60.980				
BACKHOE/FRONT-END LOADER	12/01/2010	$60.980				
BARCO-TYPE JUMPING TAMPER	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600
BLOCK PAVER, RAMMER / CURB SETTER	12/01/2010	$49.850	06/01/2011	$50.850	12/01/2011	$52.100
BOILER MAKER	01/01/2010	$55.850				

APPRENTICE: BOILERMAKER - Local 29

Ratio	Step	1	2	3	4	5	6	7	8
1:5	%	65.00	65.00	70.00	75.00	80.00	85.00	90.00	95.00

Apprentice wage shall be no less than the following:

Step 1 $42.44/$42.44/$44.34/$44.43/$48.31/$50.20/$52.08/$53.97

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	08/01/2010	$69.910	02/01/2011	$70.900	08/01/2011	$73.000
	02/01/2012	$73.990				

APPRENTICE: BRICK/PLASTER/CEMENT MASON - Local 3 Newton

Ratio	Step	1	2	3	4	5
1:5	%	50.00	60.00	70.00	80.00	90.00

Apprentice wage shall be no less than the following:

Step 1 $47.31/$51.83/$54.35/$60.87/$65.39

BULLDOZER/GRADER/SCRAPER	12/01/2010	$60.630				
CAISSON & UNDERPINNING BOTTOM MAN	12/01/2010	$50.250	06/01/2011	$51.250	12/01/2011	$52.500
CAISSON & UNDERPINNING LABORER	12/01/2010	$49.100	06/01/2011	$50.100	12/01/2011	$51.350
CAISSON & UNDERPINNING TOP MAN	12/01/2010	$49.100	06/01/2011	$50.100	12/01/2011	$51.350
CARBIDE CORE DRILL OPERATOR	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600
CARPENTER	09/01/2010	$55.360	03/01/2011	$56.230	09/01/2011	$57.360
	03/01/2012	$58.480				

This wage schedule must be posted at the worksite in accordance with M.G.L. c. 149, § 27. Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. c. 149, § 27. Employees not receiving such rates should report the violation to the Fair Labor Division of the Office of the Attorney General, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465. Contractors with questions about the wage rates or classifications included on the wage schedules have an affirmative obligation to inquire with DOS at www.mass.gov/dos/pw or at 617-626-6952.

Issue Date: 01/19/2011 **Wage Request Number:** 20110119-008 **Page 1 of 10**

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
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Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

Awarding Authority: City of Newton

Contract Number: 11-50 **City/Town:** NEWTON

Description of Work: High School CCTV System Installation Works - Supply, Deliver and Installation of CCTV Systems at Newton North High School and Newton South High School

Job Location: Various Locations

Classification	Effective Dates and Total Rates					
APPRENTICE: CARPENTER - Zone 2 Eastern MA						
Ratio Step 1 2 3 4 5 6 7 8						
1:5 % 50.00 60.00 70.00 75.00 80.00 80.00 90.00 90.00						
Apprentice wages shall be no less than the following:						
Step 1$25.54/2$28.71/3$41.12/4$42.71/5$45.87/6$45.87/7$50.61/8$50.61						
CEMENT MASONRY/PLASTERING	08/01/2010	$68.380	02/01/2011	$69.070	08/01/2011	$70.770
	02/01/2012	$71.540				
CHAIN SAW OPERATOR	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES	12/01/2010	$61.980				
COMPRESSOR OPERATOR	12/01/2010	$49.690				
DELEADER (BRIDGE)	01/01/2011	$64.410	07/01/2011	$65.410	01/01/2012	$66.410
	07/01/2012	$67.410	01/01/2013	$68.410		
APPRENTICE: PAINTER Local 33 - BRIDGES/TANKS						
Ratio Step 1 2 3 4 5 6 7 8						
1:1 % 50.00 55.00 60.00 65.00 70.00 75.00 80.00 90.00						
Apprentice wages shall be no less than the following: Steps are 750 hrs.						
Step 1$29.31/2$34.86/3$39.01/4$41.16/5$51.51/6$53.66/7$55.81/8$60.11						
DEMO: ADZEMAN	12/01/2010	$49.100	06/01/2011	$50.100	12/01/2011	$51.350
DEMO: BACKHOE/LOADER/HAMMER OPERATOR	12/01/2010	$50.100	06/01/2011	$51.100	12/01/2011	$52.350
APPRENTICE: LABORER Demo Backhoe/Loader/Hammer Operator						
Ratio Step 1 2 3 4						
1:5 % 60.00 70.00 80.00 90.00						
Apprentice wages shall be no less than the following:						
Step 1$37.48/2$40.64/3$43.79/4$46.95						
DEMO: BURNERS	12/01/2010	$49.850	06/01/2011	$50.850	12/01/2011	$52.100
APPRENTICE: LABORER Demo Burners						
Ratio Step 1 2 3 4						
1:5 % 60.00 70.00 80.00 90.00						
Apprentice Wages shall be no less than the following:						
Step 1$37.33/2$40.46/3$43.59/4$46.72						
DEMO: CONCRETE CUTTER/SAWYER	12/01/2010	$50.100	06/01/2011	$51.100	12/01/2011	$52.350
DEMO: JACKHAMMER OPERATOR	12/01/2010	$49.850	06/01/2011	$50.850	12/01/2011	$52.100
DEMO: WRECKING LABORER	12/01/2010	$49.100	06/01/2011	$50.100	12/01/2011	$51.350
APPRENTICE: LABORER Demo Wrecking Laborer						
Ratio Step 1 2 3 4						
1:5 % 60.00 70.00 80.00 90.00						
Apprentice wages shall be no less than the following:						
Step 1$36.88/2$39.94/3$42.99/4$46.05						
DIRECTIONAL DRILL MACHINE OPERATOR	12/01/2010	$60.630				

This wage schedule must be posted at the worksite in accordance with M.G.L. c. 149, § 27. Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. c. 149, § 27. Employees not receiving such rates should report the violation to the Fair Labor Division of the Office of the Attorney General, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465. Contractors with questions about the wage rates or classifications included on the wage schedules have an affirmative obligation to inquire with DOS at www.mass.gov/dos/pw or at 617-626-6952.

Issue Date: 01/19/2011 **Wage Request Number:** 20110119-008 **Page 2 of 10**

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Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

Awarding Authority: City of Newton

Contract Number: 11-50 **City/Town:** NEWTON

Description of Work: High School CCTV System Installation Works - Supply, Deliver and Installation of CCTV Systems at Newton North High School and Newton South High School

Job Location: Various Locations

Classification	Effective Dates and Total Rates					
DIVER	08/01/2010	$77.440	08/01/2011	$80.190		
DIVER TENDER	08/01/2010	$62.570	08/01/2011	$65.320		
DIVER TENDER (EFFLUENT)	08/01/2010	$82.330	08/01/2011	$86.460		
DIVER/SLURRY (EFFLUENT)	08/01/2010	$104.640	08/01/2011	$108.760		
ELECTRICIAN	09/01/2010	$67.040	03/01/2011	$68.290		

APPRENTICE: ELECTRICIAN - Local103

Ratio	Step	1	2	3	4	5	6	7	8	9	10
23***	%	40.00	40.00	45.00	45.00	50.00	55.00	60.00	65.00	70.00	75.00

Apprentice wages shall be no less than the following Steps: App Prior 11/03; 30/35/40/45/50/55/65/70/75/80

1$34.13/2$34.13/3$43.56/4$43.56/5$45.70/6$47.83/7$49.97/8$52.10/9$54.24/10$56.37

ELEVATOR CONSTRUCTOR	01/01/2011	$66.690	01/01/2012	$68.190

APPRENTICE: ELEVATOR CONSTRUCTOR - Local4

Ratio	Step	1	2	3	4	5
1:1	%	50.00	55.00	65.00	70.00	80.00

Apprentice rates shall be no less than the following: Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

Step 1$34.24/2$43.74/3$48.86/4$51.41/5$54.50

ELEVATOR CONSTRUCTOR HELPER	01/01/2011	$52.830	01/01/2012	$54.330			
FENCE & GUARD RAIL ERECTOR	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600	
FIELD ENG. - INST. PERSON (BLDG, SITE, HVY CONST)	11/01/2010	$38.140	05/01/2011	$59.380			
FIELD ENG. - ROD PERSON (BLDG, SITE, HVY CONST)	11/01/2010	$42.200	05/01/2011	$42.930			
FIELD ENG.-CHIEF OF PARTY (BLDG, SITE, HVY CONST)	11/01/2010	$59.520	05/01/2011	$60.770			
FIRE ALARM INSTALLER	09/01/2010	$67.040	03/01/2011	$68.290			
FIRE ALARM REPAIR / MAINTENANCE	09/01/2010	$55.050	03/01/2011	$56.300			
FIREMAN (ASST. ENGINEER)	12/01/2010	$54.840					
FLAGGER & SIGNALER	12/01/2010	$38.050	06/01/2011	$39.050	12/01/2011	$39.050	
FLOORCOVERER	09/01/2010	$60.380	03/01/2011	$61.130	09/01/2011	$62.380	
	03/01/2012	$63.630					

APPRENTICE: FLOORCOVERER - Local 2168 Zone I

Ratio	Step	1	2	3	4	5	6	7	8
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00

Apprentice rates shall be no less than the following: Steps are 750 hrs.

Step 1$27.91/2$29.72/3$40.18/4$42.00/5$45.70/6$47.52/7$51.22/8$53.04

FORK LIFT/CHERRY PICKER	12/01/2010	$60.980					
GENERATOR/LIGHTING PLANT/HEATERS	12/01/2010	$49.690					
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	01/01/2011	$53.910	07/01/2011	$54.910	01/01/2012	$55.910	
	07/01/2012	$56.910	01/01/2013	$57.910			

This wage schedule must be posted at the worksite in accordance with M.G.L. c. 149, § 27. Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. c. 149, § 27. Employees not receiving such rates should report the violation to the Fair Labor Division of the Office of the Attorney General, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465. Contractors with questions about the wage rates or classifications included on the wage schedules have an affirmative obligation to inquire with DOS at www.mass.gov/dos/pw or at 617-626-6952.

Issue Date: 01/19/2011 **Wage Request Number:** 20110119-008 **Page 3 of 10**

THE COMMONWEALTH OF MASSACHUSETTS
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Acting Commissioner of
Division of Occupational Safety

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

Awarding Authority: City of Newton

Contract Number: 11-50 **City/Town:** NEWTON

Description of Work: High School CCTV System Installation Works - Supply, Deliver and Installation of CCTV Systems at Newton North High School and Newton South High School

Job Location: Various Locations

Classification	Effective Dates and Total Rates					
APPRENTICE: GLAZIER - Local 35 Zone 2						
Ratio Step 1 2 3 4 5 6 7 8						
1:1 % 50.00 55.00 60.00 65.00 70.00 75.00 80.00 90.00						
Apprentice wages shall be no less than the following: Steps are 750 hrs.						
Step 1 $24.06/2 $31.08/3 $32.71/4 $34.33/5 $44.16/6 $45.78/7 $47.41/8 $50.66						
HOISTING ENGINEER/CRANES/GRADALLS	12/01/2010	$60.980				
APPRENTICE: HOIST/PORT. ENG. - Local 4						
Ratio Step 1 2 3 4 5 6 7 8						
1:6 % 55.00 60.00 65.00 70.00 75.00 80.00 85.00 90.00						
Apprentice wages shall be no less than the following:						
Step 1 $31.33/2 $45.47/3 $47.41/4 $49.35/5 $51.29/6 $53.22/7 $55.16/8 $57.10						
HVAC (DUCTWORK)	08/01/2010	$63.960	02/01/2011	$65.210	08/01/2011	$66.460
	02/01/2012	$67.710	08/01/2012	$68.960	02/01/2013	$70.210
HVAC (ELECTRICAL CONTROLS)	09/01/2010	$67.040	03/01/2011	$68.290		
HVAC (TESTING AND BALANCING - AIR)	08/01/2010	$63.960	02/01/2011	$65.210	08/01/2011	$66.460
	02/01/2012	$67.710	08/01/2012	$68.960	02/01/2013	$70.210
HVAC (TESTING AND BALANCING - WATER)	09/01/2010	$68.730				
HVAC MECHANIC	09/01/2010	$68.730				
HYDRAULIC DRILLS	12/01/2010	$49.850	06/01/2011	$50.850	12/01/2011	$52.100
INSULATOR (PIPES & TANKS)	09/01/2010	$61.660				
APPRENTICE: ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston						
Ratio Step 1 2 3 4						
1:4 % 50.00 60.00 70.00 80.00						
Apprentice wages shall be no less than the following: Steps are 1 year						
Step 1 $37.34/2 $42.20/3 $47.07/4 $51.93						
IRONWORKER/WELDER	03/16/2010	$60.940				
APPRENTICE: IRONWORKER - Local 7 Boston						
Ratio Step 1 2 3 4 5 6						
** % 60.00 70.00 75.00 80.00 85.00 90.00						
Apprentice wages shall be no less than the following: ** Structural 1:4; Ornamental 1:4						
Step 1 $44.82/2 $50.35/3 $52.12/4 $53.88/5 $55.65/6 $57.41						
JACKHAMMER & PAVING BREAKER OPERATOR	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600
LABORER	12/01/2010	$49.100	06/01/2011	$50.100	12/01/2011	$51.350
APPRENTICE: LABORER - Zone 1						
Ratio Step 1 2 3 4						
1:5 % 60.00 70.00 80.00 90.00						
Apprentice wages shall be no less than the following:						
Step 1 $36.88/2 $39.94/3 $42.99/4 $46.05						
LABORER: CARPENTER TENDER	12/01/2010	$49.100	06/01/2011	$50.100	12/01/2011	$51.350

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Issue Date: 01/19/2011 **Wage Request Number:** 20110119-008 **Page 4 of 10**

THE COMMONWEALTH OF MASSACHUSETTS
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Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

Awarding Authority: City of Newton

Contract Number: 11-50 **City/Town:** NEWTON

Description of Work: High School CCTV System Installation Works - Supply, Deliver and Installation of CCTV Systems at Newton North High School and Newton South High School

Job Location: Various Locations

Classification	Effective Dates and Total Rates					
LABORER: CEMENT FINISHER TENDER	12/01/2010	$49.100	06/01/2011	$50.100	12/01/2011	$51.350
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER	12/01/2010	$49.100	06/01/2011	$50.100	12/01/2011	$51.350
LABORER: MASON TENDER	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600
LABORER: MULTI-TRADE TENDER	12/01/2010	$49.100	06/01/2011	$50.100	12/01/2011	$51.350
LABORER: TREE REMOVER	12/01/2010	$49.100	06/01/2011	$50.100	12/01/2011	$51.350
This classification applies to the wholesale removal of standing trees including all associated trimming of branches and limbs, and applies to the removal of branches at locations not on or around utility lines.						
LASER BEAM OPERATOR	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600
MARBLE & TILE FINISHERS	08/01/2010	$58.470	02/01/2011	$59.270	08/01/2011	$60.950
	02/01/2012	$61.740				
APPRENTICE: MARBLE & TILE FINISHER - Local 3 Marble & Tile						
Ratio / Step: 1 / 1:3	2: 50.00%	3: 60.00%	4: 70.00%	5: 80.00%	6: 90.00%	
Apprentice wages shall be no less than the following:			Steps are 800 hrs.			
Step 1 $41.18/2 $44.43/3 $48.09/4 $51.55/5 $55.01						
MARBLE MASONS,TILELAYERS & TERRAZZO MECH	08/01/2010	$69.950	02/01/2011	$70.940	08/01/2011	$73.040
	02/01/2012	$74.030				
APPRENTICE: MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile						
Ratio / Step: 1 / 1:3	2: 50.00%	3: 60.00%	4: 70.00%	5: 80.00%	6: 90.00%	
Apprentice wages shall be no less than the following:						
Step 1 $47.33/2 $51.85/3 $56.38/4 $60.90/5 $65.43						
MECH. SWEEPER OPERATOR (NON-CONSTRUCTION)	07/01/2010	$29.590	07/01/2011	$30.290		
MECH. SWEEPER OPERATOR (ON CONST. SITES)	12/01/2010	$60.630				
MECHANICS MAINTENANCE	12/01/2010	$60.630				
MILLWRIGHT (Zone 1)	04/01/2010	$55.850				
APPRENTICE: MILLWRIGHT - Local 1121 Zone 1						
Ratio / Step: 1 / 1:5	2: 50.00%	3: 55.00%	4: 60.00%	5: 65.00%	6: 70.00%	7: 75.00%	8: 80.00%	9: 85.00%
Apprentice wages shall be no less than the following:								
Step 1 $25.95/2 $27.63/3 $37.99/4 $39.67/5 $42.83/6 $44.51/7 $47.67/8 $49.34								
MORTAR MIXER	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600
OILER (OTHER THAN TRUCK CRANES,GRADALLS)	12/01/2010	$43.170				
OILER (TRUCK CRANES, GRADALLS)	12/01/2010	$46.330				
OTHER POWER DRIVEN EQUIPMENT - CLASS II	12/01/2010	$60.630				
PAINTER (BRIDGES/TANKS)	01/01/2011	$64.410	07/01/2011	$65.410	01/01/2012	$66.410
	07/01/2012	$67.410	01/01/2013	$68.410		

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Issue Date: 01/19/2011 **Wage Request Number:** 20110119-008 **Page 5 of 10**

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Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

Awarding Authority: City of Newton

Contract Number: 11-50 **City/Town:** NEWTON

Description of Work: High School CCTV System Installation Works - Supply, Deliver and Installation of CCTV Systems at Newton North High School and Newton South High School

Job Location: Various Locations

Classification	Effective Dates and Total Rates					
APPRENTICE: PAINTER Local35 - BRIDGES/TANKS						
Ratio Step 1 2 3 4 5 6 7 8						
1:1 % 50.00 55.00 60.00 65.00 70.00 75.00 80.00 90.00						
Apprentice wages shall be no less than the following: Steps are 750 hrs.						
Step 1 $29.31/$30.84/$39.01/$41.14/$51.31/$53.44/$55.58/$40.11						
PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2011	$55.310	07/01/2011	$56.310	01/01/2012	$57.310
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.	07/01/2012	$58.310	01/01/2013	$59.310		
APPRENTICE: PAINTER Local35 Zone 2 - Spray/Sandblast - New						
Ratio Step 1 2 3 4 5 6 7 8						
1:1 % 50.00 55.00 60.00 65.00 70.00 75.00 80.00 90.00						
Apprentice wages shall be no less than the following:						
Step 1 $24.74/$31.83/$33.55/$35.24/$45.14/$46.83/$48.53/$31.92						
PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2011	$53.370	07/01/2011	$54.370	01/01/2012	$55.370
	07/01/2012	$56.370	01/01/2013	$57.370		
APPRENTICE: PAINTER Local35 Zone 2 - Spray/Sandblast - Repaint						
Ratio Step 1 2 3 4 5 6 7 8						
1:1 % 50.00 55.00 60.00 65.00 70.00 75.00 80.00 90.00						
Apprentice wages shall be no less than the following:						
Step 1 $23.79/$30.78/$32.38/$33.98/$43.78/$45.38/$46.98/$30.17						
PAINTER (TRAFFIC MARKINGS)	12/01/2010	$49.100	06/01/2011	$50.100	12/01/2011	$51.350
PAINTER / TAPER (BRUSH, NEW) *	01/01/2011	$53.910	07/01/2011	$54.910	01/01/2012	$55.910
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.	07/01/2012	$56.910	01/01/2013	$57.910		
APPRENTICE: PAINTER - Local35 Zone 2 - BRUSH NEW						
Ratio Step 1 2 3 4 5 6 7 8						
1:1 % 50.00 55.00 60.00 65.00 70.00 75.00 80.00 90.00						
Apprentice wages shall be no less than the following: Steps are 750 hrs.						
Step 1 $24.04/$31.08/$32.71/$34.33/$44.14/$45.78/$47.41/$30.66						
PAINTER / TAPER (BRUSH, REPAINT)	01/01/2011	$51.970	07/01/2011	$52.970	01/01/2012	$53.970
	07/01/2012	$54.970	01/01/2013	$55.970		
APPRENTICE: PAINTER Local35 Zone 2 - BRUSH REPAINT						
Ratio Step 1 2 3 4 5 6 7 8						
1:1 % 50.00 55.00 60.00 65.00 70.00 75.00 80.00 90.00						
Apprentice wages shall be no less than the following: Steps are 750 hrs.						
Step 1 $23.09/$30.01/$31.54/$33.07/$42.80/$44.33/$45.86/$48.91						
PANEL & PICKUP TRUCKS DRIVER	12/01/2010	$45.360	06/01/2011	$46.110	12/01/2011	$46.770
	06/01/2012	$47.420	12/01/2012	$48.450		
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)	08/01/2010	$62.570	08/01/2011	$65.320		
PILE DRIVER	08/01/2010	$62.570	08/01/2011	$65.320		

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Issue Date: 01/19/2011 **Wage Request Number:** 20110119-008 **Page 6 of 10**

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Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

Awarding Authority: City of Newton

Contract Number: 11-50 **City/Town:** NEWTON

Description of Work: High School CCTV System Installation Works - Supply, Deliver and Installation of CCTV Systems at Newton North High School and Newton South High School

Job Location: Various Locations

Classification	Effective Dates and Total Rates					
APPRENTICE: PILE DRIVER - Local56 Zone 1						
Ratio Step 1 2 3 4 5 6 7 8						
1:3 % 60.00 65.00 70.00 75.00 80.00 85.00 90.00 95.00						
Apprentice wages shall be no less than the following:						
Step 1$46.76/$48.76/$50.71/$52.59/$54.67/$56.64/$58.62/$60.59						
PIPEFITTER & STEAMFITTER	09/01/2010	$68.730				
APPRENTICE: PIPEFITTER - Local537						
Ratio Step 1 2 3 4 5						
** % 40.00 45.00 60.00 70.00 80.00						
Apprentice Rates-Step1$33.44/$43.38/$50.29/$54.90/$59.51 **1:3; 3:5; 1:10 thereafter / Steps are 1 yr.						
Refrig/AC Mechanic **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8:17;9:20;10:23(Max)						
PIPELAYER	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600
PLUMBERS & GASFITTERS	09/01/2010	$67.500	03/01/2011	$67.500	09/01/2011	$68.250
	03/01/2012	$69.050	09/01/2012	$70.300	03/01/2013	$71.550
APPRENTICE: PLUMBER - Local12						
Ratio Step 1 2 3 4 5						
** % 35.00 40.00 55.00 65.00 75.00						
Apprentice wages shall be no less than the following: **1:2; 2:4; 3:10; 4:14; 5:19/Steps are 1 yr.						
Step 1$30.01/$32.89/$41.54/$47.31/4-wflic$50.20/$53.09/5-wflic$55.98						
PNEUMATIC CONTROLS (TEMP.)	09/01/2010	$68.730				
PNEUMATIC DRILL/TOOL OPERATOR	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600
POWDERMAN & BLASTER	12/01/2010	$50.100	06/01/2011	$51.100	12/01/2011	$52.350
POWER SHOVEL/DERRICK/TRENCHING MACHINE	12/01/2010	$60.980				
PUMP OPERATOR (CONCRETE)	12/01/2010	$60.980				
PUMP OPERATOR (DEWATERING, OTHER)	12/01/2010	$49.690				
READY-MIX CONCRETE DRIVER	05/01/2010	$41.080	05/01/2011	$41.690		
RECLAIMERS	12/01/2010	$60.630				
RESIDENTIAL WOOD FRAME CARPENTER **	04/01/2009	$35.620				

** The Residential Wood Frame Carpenter classification applies only to the construction of new, wood frame residences that do not exceed four stories including the basement.
As of 9/1/09 Carpentry work on wood-frame residential WEATHERIZATION projects shall be paid the RESIDENTIAL WOOD FRAME CARPENTER rate.

APPRENTICE: CARPENTER (Residential Wood Frame) - Zone 2						
Ratio Step 1 2 3 4 5 6 7 8						
1:5 % 40.00 40.00 65.00 70.00 75.00 80.00 85.00 90.00						
Apprentice wages shall be no less than the following:						
Step 1$20.13/$24.04/$27.23/$28.43/$29.63/$30.83/$32.03/$33.22						
RIDE-ON MOTORIZED BUGGY OPERATOR	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600
ROLLER/SPREADER/MULCHING MACHINE	12/01/2010	$60.630				
ROOFER (Inc. Roofer Waterproofing & Roofer Dampproofg)	02/01/2009	$53.860				

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Issue Date: 01/19/2011 **Wage Request Number:** 20110119-008 **Page 7 of 10**

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Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

Awarding Authority: City of Newton

Contract Number: 11-50 **City/Town:** NEWTON

Description of Work: High School CCTV System Installation Works - Supply, Deliver and Installation of CCTV Systems at Newton North High School and Newton South High School

Job Location: Various Locations

Classification	Effective Dates and Total Rates					
APPRENTICE: ROOFER - Local33						
Ratio Step 1 2 3 4 5						
** % 50.00 60.00 65.00 75.00 85.00						
**1:5, 2:6-10, then 1:10; Reroofing: 1:4, then 1:1 Step 1 is 2000 hrs; Steps 2-5 are 1000 hrs.						
Apprentice rates no less than: Step 1 $29.91/$40.04/$41.74/$45.22/$48.48						
ROOFER SLATE / TILE / PRECAST CONCRETE	02/01/2009	$54.110				
APPRENTICE: ROOFER (Slate/Tile/Precast Concrete) - Local33						
Ratio Step 1 2 3 4 5						
** % 50.00 60.00 65.00 75.00 85.00						
Apprentice wages shall be paid no less than the following:						
Step 1 $30.04/$40.19/$41.93/$45.41/$48.89						
SHEET METAL WORKER	08/01/2010	$63.960	02/01/2011	$65.210	08/01/2011	$66.460
	02/01/2012	$67.710	08/01/2012	$68.960	02/01/2013	$70.210
APPRENTICE: SHEET METAL WORKER - Local17-A						
Ratio Step 1 2 3 4 5 6 7						
1:4 % 40.00 45.00 50.00 60.00 65.00 75.00 85.00						
Apprentice wages shall be no less than the following: Steps 1-3 are 1 year; Steps 4-7 are 6 mos.						
Step 1 $24.84/$33.33/$33.95/$41.20/$43.83/$49.08/$53.83						
SIGN ERECTOR	06/01/2009	$37.780				
APPRENTICE: SIGN ERECTOR - Local33 Zone 2						
Ratio Step 1 2 3 4 5 6 7 8 9						
1:1 % 50.00 55.00 60.00 65.00 70.00 75.00 80.00 85.00 90.00						
Apprentice wages shall be no less than the following: Steps are 6 mos.						
Step 1 $19.48/$23.12/$24.36/$25.40/$30.34/$31.58/$32.82/$34.06/$35.30						
SPECIALIZED EARTH MOVING EQUIP < 35 TONS	12/01/2010	$45.820	06/01/2011	$46.570	12/01/2011	$47.230
	06/01/2012	$47.880	12/01/2012	$48.910		
SPECIALIZED EARTH MOVING EQUIP > 35 TONS	12/01/2010	$46.110	06/01/2011	$46.860	12/01/2011	$47.520
	06/01/2012	$48.170	12/01/2012	$49.200		
SPRINKLER FITTER	01/01/2011	$70.550	09/01/2011	$71.350	01/01/2012	$71.500
	03/01/2012	$72.250	09/01/2012	$73.250	01/01/2013	$73.400
	03/01/2013	$74.400				
APPRENTICE: SPRINKLER FITTER - Local550						
Ratio Step 1 2 3 4 5 6 7 8 9 10						
1:1 % 40.00 45.00 50.00 55.00 60.00 65.00 70.00 75.00 80.00 85.00						
Apprentice wages shall be no less than the following steps:						
1 $36.20/$38.75/$41.30/$43.85/$46.40/$48.95/$51.50/$54.05/$56.60/10 $59.15						
STEAM BOILER OPERATOR	12/01/2010	$60.630				
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN	12/01/2010	$60.630				
TELECOMMUNICATION TECHNICIAN	09/01/2010	$55.050	03/01/2011	$56.300		

This wage schedule must be posted at the worksite in accordance with M.G.L. c. 149, § 27. Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. c. 149, § 27. Employees not receiving such rates should report the violation to the Fair Labor Division of the Office of the Attorney General, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465. Contractors with questions about the wage rates or classifications included on the wage schedules have an affirmative obligation to inquire with DOS at www.mass.gov/dos/pw or at 617-626-6952.

Issue Date: 01/19/2011 **Wage Request Number:** 20110119-008 **Page 8 of 10**

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

JOANNE F. GOLDSTEIN
Secretary of Labor and Workforce Development

GEORGE E. NOEL
Director of Labor

HEATHER E. ROWE
Acting Commissioner of
Division of Occupational Safety

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

Awarding Authority: City of Newton

Contract Number: 11-50 **City/Town:** NEWTON

Description of Work: High School CCTV System Installation Works - Supply, Deliver and Installation of CCTV Systems at Newton North High School and Newton South High School

Job Location: Various Locations

Classification	Effective Dates and Total Rates					
APPRENTICE: TELECOMMUNICATION TECHNICIAN - Local103						
Ratio Step 1 2 3 4 5 6 7 8						
1:1 % 40.00 45.00 50.00 55.00 60.00 65.00 75.00 80.00						
Apprentice wages shall be no less than the following:						
Step 1$35.84/2$37.44/3$39.05/4$40.64/5$42.24/6$43.85/7$47.05/8$48.65						
TERRAZZO FINISHERS	08/01/2010	$68.850	02/01/2011	$69.840	08/01/2011	$71.940
	02/01/2012	$72.930				
APPRENTICE: TERRAZZO FINISHER - Local3 Marble & Tile						
Ratio Step 1 2 3 4 5						
1:3 % 50.00 60.00 70.00 80.00 90.00						
Apprentice wages shall be no less than the following: Steps are 800 hrs.						
Step 1$44.78/2$51.19/3$55.41/4$60.02/5$64.44						
TEST BORING DRILLER	12/01/2010	$50.500	06/01/2011	$51.500	12/01/2011	$52.750
TEST BORING DRILLER HELPER	12/01/2010	$49.220	06/01/2011	$50.220	12/01/2011	$51.470
TEST BORING LABORER	12/01/2010	$49.100	06/01/2011	$50.100	12/01/2011	$51.350
TRACTORS/PORTABLE STEAM GENERATORS	12/01/2010	$60.630				
TRAILERS FOR EARTH MOVING EQUIPMENT	12/01/2010	$46.400	06/01/2011	$47.150	12/01/2011	$47.810
	06/01/2012	$48.460	12/01/2012	$49.490		
TUNNEL WORK - COMPRESSED AIR	12/01/2010	$61.680	06/01/2011	$62.930	12/01/2011	$64.180
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)	12/01/2010	$63.680	06/01/2011	$64.930	12/01/2011	$66.180
TUNNEL WORK - FREE AIR	12/01/2010	$53.750	06/01/2011	$55.000	12/01/2011	$56.250
TUNNEL WORK - FREE AIR (HAZ. WASTE)	12/01/2010	$55.750	06/01/2011	$57.000	12/01/2011	$58.250
VAC-HAUL	12/01/2010	$45.820	06/01/2011	$46.570	12/01/2011	$47.230
	06/01/2012	$47.880	12/01/2012	$48.910		
WAGON DRILL OPERATOR	12/01/2010	$49.350	06/01/2011	$50.350	12/01/2011	$51.600
WASTE WATER PUMP OPERATOR	12/01/2010	$60.980				
WATER METER INSTALLER	09/01/2010	$67.500	03/01/2011	$67.500	09/01/2011	$68.250
	03/01/2012	$69.050	09/01/2012	$70.300	03/01/2013	$71.550
Outside Electrical - East						
CABLE TECHNICIAN (Power Zone)	08/30/2010	$34.050	08/29/2011	$35.310		
CABLEMAN (Underground Ducts & Cables)	08/30/2010	$44.320	08/29/2011	$46.110		
DRIVER / GROUNDMAN CDL	08/30/2010	$39.360	08/29/2011	$40.830		
DRIVER / GROUNDMAN - Inexperienced (<2000 Hrs)	08/30/2010	$31.890	08/29/2011	$33.050		
EQUIPMENT OPERATOR (Class A CDL)	08/30/2010	$48.320	08/29/2011	$50.110		
EQUIPMENT OPERATOR (Class B CDL)	08/30/2010	$41.760	08/29/2011	$43.340		
GROUNDMAN	08/30/2010	$31.390	08/29/2011	$32.550		
GROUNDMAN - Inexperienced (< 2000 Hrs.)	08/30/2010	$26.840	08/29/2011	$27.790		
JOURNEYMAN LINEMAN	08/30/2010	$57.510	08/29/2011	$59.620		

This wage schedule must be posted at the worksite in accordance with M.G.L. c. 149, § 27. Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. c. 149, § 27. Employees not receiving such rates should report the violation to the Fair Labor Division of the Office of the Attorney General, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465. Contractors with questions about the wage rates or classifications included on the wage schedules have an affirmative obligation to inquire with DOS at www.mass.gov/dos/pw or at 617-626-6952.

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Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

Awarding Authority: City of Newton

Contract Number: 11-50 **City/Town:** NEWTON

Description of Work: High School CCTV System Installation Works - Supply, Deliver and Installation of CCTV Systems at Newton North High School and Newton South High School

Job Location: Various Locations

Classification	Effective Dates and Total Rates	
APPRENTICE: LINEMAN (Outside Electrical)- East Local 104		
Ratio Step 1 2 3 4 5 6 7		
1:2 % 60.00 65.00 70.00 75.00 80.00 85.00 90.00		
Apprentice wages shall be no less than the following:		
Step 1 $34.39/2 $34.99/3 $39.45/4 $42.30/5 $44.95/6 $47.61/7 $50.76		
TELEDATA CABLE SPLICER	03/01/2007	$27.330
TELEDATA LINEMAN/EQUIPMENT OPERATOR	03/01/2007	$27.330
TELEDATA WIREMAN/INSTALLER/TECHNICIAN	03/01/2007	$27.330
TREE TRIMMER	02/01/2009	$19.010
This classification applies only to the trimming of branches on and around utility lines.		
TREE TRIMMER GROUNDMAN	02/01/2009	$17.060
This classification applies only to the trimming of branches on and around utility lines.		

Additional Apprentice Information:
Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentice ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, Section 11.

All steps are six months (1000 hours) unless otherwise specified.

* Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof.
** Multiple ratios are listed in the comment field.
*** The job site ratio of 2 apprentices (APP) for every 3 journeymen (JM) is allowed as follows:
1 JM: 1 APP; 2-3 JM: 2 APP; 4-6 JM: 4 APP; 7-9 JM: 6 APP; 10-12 JM: 8 APP; 13-15 JM: 10 APP; etc.
**** The job site ratio of 2 apprentices (APP) for every 3 journeymen (JM) is allowed as follows:
1-2 JM: 1 APP; 3-4 JM: 2 APP; 5 JM: 3 APP; 6-7 JM: 4 APP; 8 JM: 5 APP; etc.

This wage schedule must be posted at the worksite in accordance with M.G.L. c. 149, § 27. Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. c. 149, § 27. Employees not receiving such rates should report the violation to the Fair Labor Division of the Office of the Attorney General, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465. Contractors with questions about the wage rates or classifications included on the wage schedules have an affirmative obligation to inquire with DOS at www.mass.gov/dos/pw or at 617-626-6952.

Issue Date: 01/19/2011 **Wage Request Number:** 20110119-008 **Page 10 of 10**

WEEKLY PAYROLL REPORT FORM

Company Name:

Project Name:

Awarding Auth.:

Work Week Ending:

Prime Contractor

Subcontractor
List Prime Contractor:

Employer Signature:

Print Name & Title:

Employee Name & Address	Work Classification	Hours Worked							(A) Tot. Hrs.	(B) Hourly Base Wage	Employer Contributions			(F) [B+C+D+E] Hourly Total Wage (prev. wage)	(G) [A*F] Weekly Total Amount
											(C) Health & Welfare	(D) Pension	(E) Supp. Unemp.		
		S	M	T	W	T	F	S							

NOTE: Every contractor and subcontractor is required to submit a copy of their weekly payroll records to the awarding authority.

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CCTV SURVEILLANCE SYSTEM
Newton North and South High School

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PLANS MUST BE OBTAINED THROUGH THE PURCHASING DEPT.

DIVISION 1

SECTION 00840

INSURANCE REQUIREMENTS

1.01 GENERAL

A. This section specifies the Owner's insurance requirements and relates to the General Conditions of the Contract for Construction and the Supplement to the Standard Form of Agreement Between Owner and Contractor.

B. Provisions of the General Conditions of the Contract for Construction and Supplement to the Standard Form of Agreement Between Owner and Contractor which are not modified by the following insurance requirements remain in full effect.

C. The Owner, at its own expense, will carry a Builder's Risk endorsement on its property insurance policy. The Builder's Risk endorsement on its property insurance policy. The Builder's Risk endorsement will cover all materials on the project site which may, at the time of any damage, be owned by the Contractor, but which are or will become part of the project.

1.02 INSURANCE REQUIREMENTS

A. The insurance required shall be written for not less than the limits of liability required by law or the following limits, whichever is greater:

State and Federal Workmen's Compensation Statutory
Employer's Liability (Each Accident) ..... $ 500,000
Benefits required by Union Contract ..... As required

GENERAL LIABILITY*

General Liability - Bodily Injury/Death Each Occurrence $1,000,000
General Liability - Bodily Injury Aggregate $3,000,000
General Liability - Property Damage Each Occurrence $1,000,000
General Liability - Property Damage Aggregate $3,000,000

General Liability shall include coverage for the following:

Comprehensive Form
Premises/Operations Liability
Explosion, Collapse and Underground (XCU)
Products/Completed Operations
Contractual Liability
Independent Contractors
Broad Form Property Damage
Personal Injury Including Libel and Slander Coverage
Broad Form CGL Endorsement

AUTOMOBILE LIABILITY**

Comp. Automobile Liability - Bodily Injury Per Person..... $ 1,000,000
Comp. Automobile Liability - Bodily Injury Per Accident ..... $ 1,000,000
Comp. Automobile Liability - Property Damage..... $ 1,000,000

EXCESS LIABILITY (UMBRELLA COVERAGE)

Bodily Injury and Property Damage Combined Each Occurrence ..... $ 2,000,000

Bodily Injury and Property Damage Combined Aggregate..... $ 2,000,000

B. Exclusions: The Owner's property insurance shall not cover tools, equipment, shoring, staging, forms, temporary buildings or other equipment owned or rented by the Contractor, its Subcontractors, or any worker.

C. Insurance Certificates: The Contractor and all subcontractors who are required to provide insurance under the Contract shall provide accurate and bona fide "Certificates of Insurance" issued by a responsible agent of the insurance company.

1. Certificate Content: Such "Certificates of Insurance" shall clearly indicate the insurance coverage provided including all riders and limits specified. Each "Certificate of Insurance" shall be accompanied by a sworn and duly notarized statement from the responsible agent of the insurance company issuing the Certificate clearly stating that all insurance specified and required by the Contract Documents is provided and in force, and also a clear statement of all exceptions and deviations, if any, from the Contract Document insurance requirements.

2. Responsibility: The insurance agent issuing and authorizing the "Certificate of Insurance" shall be responsible and liable for the accuracy and validity of the "Certificate of Insurance". Each insured party shall certify by sworn and duly notarized statement that the "Certificates of Insurance" issued for them are bona fide.

3. Disclaimers Prohibited: "Certificates of Insurance" shall not contain any disclaimers such as: "This Certificate is issued as a matter of information only and confers no rights upon the certificate holder. This Certificate does not amend, extend, or alter the coverage afforded by the policies listed below." Disclaimers are not acceptable.

4. Certificates of Insurance Can Be Relied Upon: Parties receiving "Certificates of Insurance" shall be entitled to rely upon the "Certificates of Insurance" and shall have the right to claim the benefits and protection provided by the insurance as it applies to them.

5. Alternate to "Certificates of Insurance": Instead of providing the "Certificates of Insurance" and the sworn statements required above, the insured may provide bona fide and accurate copies of all insurance policies and riders accompanied by a sworn and duly notarized statement from the insured that the policies, riders, and documents submitted are bona fide and valid, and that parties receiving the insurance documents may rely on the documents as satisfaction of the Contract insurance requirements.

END OF SECTION

DIVISION 1

SECTION 01000

GENERAL REQUIREMENTS

01010 SUMMARY OF WORK

1.01 CONTRACT DOCUMENTS

The general provisions of the Contract Documents and General Conditions apply to the work specified in this section.

1.02 SPECIFICATION ARRANGEMENT

Titles to and arrangements of sections and paragraphs in these specifications are used merely for convenience and shall not be taken as a correct or complete segregation of the several categories of materials, equipment and labor, nor as an attempt to outline or define jurisdictional procedures.

1.03 INTENT

The entire work provided for in these technical specifications and on the Drawings shall be constructed and finished in every respect in a good workmanlike and substantial manner. All parts necessary for the proper and complete execution of the work whether the same may have been specifically mentioned or not, or indicated in a manner corresponding with the rest of the work shall be provided as if the same were particularly described and specifically provided for herein. It is not intended that the Drawings shall show every detailed piece of material or equipment, but such parts and pieces as may be in accordance with the best practices and regulatory requirements, even though not shown, shall be furnished and installed. All materials and equipment shall be new, unless specifically stated otherwise in these Contract Documents.

1.04 SCOPE

The work required by these specifications shall include furnishing all labor, skill, supervision, tools, construction plant, equipment and materials and performing all operations necessary for the properly completed contract work as shown on the Drawings, as mentioned in these specifications, and as evidently required, to the complete satisfaction of the Engineer.

1.05 GENERAL DESCRIPTION OF WORK:

The work in general consists of a new CCTV surveillance system at each of the Newton North and Newton South High Schools. The work includes, but is not limited to:

1. CCTV cameras
2. CCTV servers, recording and storage devices.
3. CCTV ethernet switches.
4. UTP and fiber optic patch cords.
5. CCTV device cabling.
6. Pathways, conduit, boxes, surface raceway.
7. UPS devices (South High School).
8. Termination, testing.
9. Programming.
10. Training.

1.06 PRE-CONSTRUCTION CONFERENCE

1. Within ten days of the contract execution and prior to the start of construction there will be a pre-construction meeting between the Contractor, representatives of the Owner and the Engineer to discuss methods of construction and completion of the project.

2. Representatives of the following shall be required to attend this conference:

   a. Owner
   b. Engineer
   d. All Sub-Contractors

3. Contractors shall make specified pre-construction submissions including the following, if not already submitted:

   a. Typed list of sub-contractors, with addresses and telephone numbers, and the name of principal contract.
   b. Certificate of Insurance
   c. Performance and Payment Bonds
   d. Construction Schedule
   e. Schedule of Values
   f. Schedule of Monthly Construction Payments

4. Agenda will include the following items:

   a. Tentative construction schedule
   b. Critical work sequencing
   c. Designation of responsible personnel
   d. Submittal of shop drawings, project data and samples
   e. Processing applications for payment
   f. Procedures for maintenance of record documents
   g. Procedures for field changes, change estimates, change orders, etc.
   h. Use of premises
   i. Location and maintenance of temporary storage buildings, field offices, etc.
   j. Major equipment deliveries and priorities
   k. Site and building security procedures
   l. Procedures for submitting Prevailing Wage Rates sheets.

01011 CONTRACT INCLUDES (LIST OF DRAWINGS)

Per the title sheet of the drawing package (44 pages).

01012 ORDER OF AND COMPLETION OF WORK

1.01 Upon the award of the contract, the Contractor shall commence work immediately, carry it on with all reasonable and proper activity and dispatch, give all notices, take out all permits and pay all charge, fees and rates therefor, and bring the work to entire completion within the period of time specified in the contract. "Entire Completion" as herein used, shall be construed as meaning the completion of all work as called for by these specifications and the contract executed in accordance herewith and the date when such completion takes place will be decided by the Engineer.

01013 PROTECTION - IN GENERAL

1.01 The Contractor is to cover and protect his work and materials from all damage during the process of the work and deliver the whole in a clean perfect condition.

01014 CONSTRUCTION RISKS

1.01 The Contractor will understand that the materials, work in place and equipment, are entirely at his risk, including loss by theft or fire during the construction period, and he will be held responsible and liable for its safety.

01015 SANITARY ACCOMMODATIONS

1.01 Make arrangements with the awarding authority for use of a designated toilet.

01016 UTILITIES

1.01 Water and electric power shall be available from existing sources where Contractor's use is not excessive and does not interfere with normal use of the buildings. Where existing utilities of the facilities are not adequate or cannot be used, the Contractor is responsible for providing alternative sources, the cost of which is to be included in bid price. The use of the facility's utilities shall be coordinated through the Engineer.

1.02 Fuel oil, temporary lighting, gas and other utilities (except for heating the school) shall be provided by the Contractor, the cost of which is to be included in the Bid Price.

1.03 The Contractor shall be allowed the use of a designated toilet room and shall clean and sanitize the toilet room at the end of each work day.

1.04 The Contractor shall provide all wiring, cables, hoses, safety devices, switches, etc., necessary for the utilities used by the Contractor and remove the same upon completion.

1.05 The Contractor shall be responsible for all materials, equipment and the associated costs to provide temporary heat to the school, in the event of delays.

01017 RECORD DRAWINGS

1.01 The Contractor shall maintain at the job site, at all times, a complete and separate set of black line prints of the Drawings on which he shall mark clearly, accurately, and promptly as the work progresses, any changes in the work made by change orders or other instructions issued by the Engineer. These drawings shall be used daily to record the progress of the work by coloring in the various pipes, equipment and associated appurtenances when installed. This progress shall incorporate both the above stated changes together with all other deviations from the design, whether resulting from the job conditions encountered in the field or from any other cause. Principal dimensions of all concealed work and valve numbers shall be recorded as applicable.

1.02 The marked-up prints shall be used as a guide in determining the progress of work installed. The Engineer will inspect these prints periodically and if found to be inaccurate or incomplete, they shall be corrected immediately.

1.03 At completion of work these marked-up prints shall be the basis of the preparation of the final record drawings. Each drawing shall be marked "RECORD AS BUILT DRAWINGS" and dated when printed. Two complete and reproducible sets of as-built drawings must be submitted before final acceptance of the work. The cost of preparing the record drawings shall be borne by the Contractor.

01018 ENGINEERING (Refer to "General Specifications")

01019 OFFICE (none required)

01020 VISITATION TO SITES

1.01 All bidders shall, before submitting a bid, visit the sites to familiarize themselves with existing conditions. Lack of knowledge of on-site conditions shall not be cause for changes to the contract values.

01021 DISPOSAL OF WASTE MATERIALS

1.01 The Contractor shall be responsible for the removal of all waste material and equipment from the site.

1.02 The Contractor shall be responsible for the removal of all hazardous materials and improperly licensed disposal sites, disposal and transportation permits.

01022 BUILDING SECURITY

1.01 The Owner will provide security for the building, however, it shall be the responsibility of the Contractor to secure all exit doors in the area where work is to be performed, coordinating same with the chief custodian or an assigned representative of the Owner. The Owner will not provide security or be responsible for the Contractor's property, fixtures, fittings, tools, equipment, etc.

01023 ACCESS TO BUILDING

1.01 The buildings will be opened during regular working hours only. Exceptions to this clause may be made by mutual agreement between the Owner and Contractor in the initial phase of the project. The building will be occupied throughout construction.

01024 PUBLIC PROTECTION

1.01 While the work is in progress, erect safe barricades to effectively protect persons from injury.

1.02 Protect all ground areas where stationary equipment is placed and protect wall areas from hoisting or material conveyers.

01025 CUTTING & PATCHING

1.01 GENERAL REQUIREMENTS

a) All of the contract documents including General and Supplementary Conditions and Division 1 General Requirements, apply to the work of this Section.

1.02 WORK INCLUDED

a) The intent of this Section is to describe, in general, procedures for performance of minor alterations, minor removals, and cutting and patching including:

1) All necessary cutting, coring, drilling, grouting, and patching to fit together the several parts of the work including repairs in kind of disturbed existing surfaces.

2) Where conflicts exist between the requirements specified herein and those of the Technical Trade Sections, those of the Trade Sections shall prevail.

b) The Contractor shall be responsible for all cutting, coring, drilling, grouting, fitting and patching of the work that may be required to make its several parts come together properly and fit, as shown upon, or reasonably implied by, Drawings and Specifications for completed structure, and he shall make good after them as Engineer may direct.

c) Expense caused by defective or ill-timed work shall be borne by the Contractor.

1.03 CUTTING AND PATCHING OPERATIONS

a) Patch and refinish to match adjacent work in quality and appearance at locations where installed work has been installed and requires reworking to accommodate other work, or has been damaged.

b) Patch and match using skilled mechanics. The quality of patched or extended work shall be not less than that specified for new work.

c) Patch or replace any portion of a finished surface which is found to be damaged, lifted, discolored, or shows other imperfections, with matching material.

1) Provide adequate support or substrate prior to patching the finish.

2) Refinish patched portions of painted or coated surfaces in a manner to produce uniform color and texture over entire surface.

3) When surface finish cannot be matched, refinish the entire surface to the nearest intersections.

d) Make the transition as smooth and workmanlike as possible. Patched work shall match adjacent work in texture and appearance so that the patch or transition is invisible to the naked eye at a distance of five feet.

END OF SECTION

DIVISION 1

SECTION 01100

SPECIAL CONDITIONS

PART 1 - GENERAL

1.01 RESPONSIBILITY AND COMPLIANCE

A. All requirements set forth under this Section are directed to the General Contractor.

B. Be responsible for arranging for facilities as specified herein and as required for proper and expeditious prosecution of the work. Pay costs for such general services and temporary facilities, except as otherwise specified, until final acceptance of the work, and remove same at completion of work.

C. Comply with applicable OSHA, state, and municipal regulations and requirements for services and facilities required under this SECTION, and in performance of all requirements of this Contract.

1.02 COORDINATION OF THE WORK

A. The Contractor shall coordinate all work with all adjacent work and shall cooperate with all other trades so as to facilitate general progress of the work. Each trade shall afford all other trades every reasonable opportunity for the installation of their respective work and for the storage of their materials and equipment. The Contractor shall be responsible for coordination.

B. The Contractor shall assume responsibility for the correctness and adequacy of his work. The Contractor shall be responsible for and pay for all damages done by his work or his workmen.

C. The Contractor shall cooperate with, and provide access and working area to other Owner's contractors for the performance of specific work assigned to them.

1.03 PROJECT MEETINGS

A. The Contractor will be required to meet with the Owner, Engineer and the Owner's representatives, at the site of the work, at regular intervals during the course of the contract for purposes of progress review, coordination of shop schedules, sample submittals, and any other items of work requiring such coordination. The dates of such meetings shall be as established by the Engineer and mutually agreed upon by the Contractor, the Engineer, and the Owner's Representative.

1.04 EXISTING BUILDING CONDITIONS

A. Before ordering any materials or doing any work, verify all measurements and existing building conditions and be responsible for the correctness of same. No extra charge or compensation will be allowed on account of difference between actual dimensions and the measurements indicated on the Drawings; any difference which may be found shall be submitted to the Engineer in writing for consideration before proceeding with the work.

1.05 PROTECTION OF EXISTING CONDITIONS

A. Take all proper precautions to protect the Owner and adjoining property from injury and unnecessary interference; and replace or put in good condition any existing items which are damaged or injured in carrying out the work, unless designated to permanently be removed or demolished.

B. Keep all access drives and walks clear of debris during building operations. Repair streets, drives, curbs, sidewalks, poles, and the like, where disturbed by building operation and leave them in as good

condition after completion of the work as before operations started. Floors, stairwells, and corridors must be kept clean of debris and means of egress maintained.

1.06 TESTS AND INSPECTION

A. Make, or have made, such tests and inspections on workmanship and materials as may be required by the building code, state or municipal laws, or as called for under the various SECTIONS of this Specification.

B. Bear all expense to such tests and inspections, unless otherwise specified under the various SECTIONS of the Specifications and furnish all labor, tools, instruments, water, temporary power and light, construction, and equipment necessary for these tests and inspection. Furnish records of all tests and inspections to the Engineer. Remove all temporary work, materials, and equipment upon completion of tests and inspections.

C. Where, the various SECTIONS of the Specifications, inspections and testing of materials, processes, and the like is called for, the selection of bureaus, laboratories, and/or agencies for such inspection and testing shall be subject to the approval of the Engineer.

D. Should any material or work be found, after testing or inspections, to be defective or inferior, remove and replace such material and/or work with new sound materials and/or work as approved by the Engineer, and bear all costs thereof.

1.07 FIRE PROTECTION AND PREVENTION

A. Comply with the following minimum requirements for fire prevention:

1. Provide the services of a City of Newton Firefighter during all welding/cutting operations performed within the school (i.e., demolition).

2. Provide sufficient quantity of carbon dioxide fire extinguishers in all areas of work.

3. Do not permit an accumulation of inflammable rubbish to stay in the building overnight.

4. Store no more than one gallon, in an approved safety can or sealed container, of any volatile inflammable liquid in any portion of the building.

5. Keep all used paint rags in a can with sufficient water to cover.

6. Make arrangements for periodic inspection by local fire protection authorities and insurance underwriters' inspections. Cooperate with said authorities to facilitate proper inspection of the premises. Comply with all applicable laws and ordinances and with the Owner's fire prevention requirements.

7. Ensure that tarpaulins that may be used during construction of work are made of material which is resistant to fire, water, and weather, are U.L. approved, and comply with FS-CCC-D-746.

1.08 ACCIDENT PREVENTION

A. Comply with all federal, state and municipal recommendations and requirements for safety, and accident prevention, and those of the Associated General Contractors of America, and the American Standards Association Standard A10.2. Ensure that the field superintendent conducts regular, frequent inspections of the site for compliance with safety regulations.

B. Neither the Owner nor the Engineer shall be responsible for providing a safe working place for the Contractor, contractors, or their employees, or any individual responsible to them for the work.

1.09 WELDING AND CUTTING

A. Where electric or gas welding or cutting work is done above or within ten (10) feet of combustible material or above space that may be occupied by persons, use interposed shields of incombustible material to protect against fire damage or injury due to sparks and hot metal.

B. Place tank supplying gases for gas welding or cutting at no greater distance from the work than is necessary for safety, securely fastened and maintained in an upright position where practicable. Such tanks, when stored for use, shall be remote from any combustible material and free from exposure to the rays of the sun or high temperatures.

C. Maintain suitable fire extinguishing equipment near all welding and cutting operations. When operations cease for the noon hour or at the end of the day, thoroughly wet down the surroundings adjacent to welding and cutting operations.

D. Station a workman equipped with suitable fire extinguishing equipment near welding and cutting operations to see that sparks do not lodge in floor cracks or pass through floor or wall openings or lodge in any combustible material. Keep the workman at the source of work which offers special hazards for thirty (30) minutes after the job is completed to make sure that smoldering fires have not been started.

E. Place a qualified electrician in charge of installing and repairing electric or arc welding equipment.

F. All welding and cuttings shall be performed by certified welders.

G. No welding and cutting is permitted during school hours.

1.10 OVERLOADING

A. Do not permit materials and fabricated work to be stacked on, or be transported over, floor and roof construction that would stress any of said construction beyond the designed live loads.

1.11 RUBBISH REMOVAL

A. Ensure that each workman engaged upon the work bears his full responsibility for cleaning up during and immediately upon completion of his work, and removes all rubbish, waste, tools, equipment, and appurtenances caused by and used in the execution of his work, but this shall in no way be construed to relieve the Contractor of his primary responsibility for maintaining the building and site clean and free of debris, leaving all work in a clean and proper condition satisfactory to the Engineer and/or Owner.

B. Do not permit rubbish to be thrown from the windows of the building.

C. Immediately after unpacking, all packing materials, case lumber, excelsior, wrapping or other rubbish, flammable or otherwise, shall be collected and removed from the building and premises.

1.12 BLASTING

A. No blasting will be permitted.

1.13 WORK AREAS, STORAGE, ACCESS, AND PARKING

A. The Contractor's work areas shall be as designated on the Drawings, and shall be strictly adhered to. Access to the existing building shall be kept free of all obstructions at all times. Assume full responsibility for trespass on and/or damage to other property by any person employed on the project.

B. A storage area for construction materials will be designated for the use of the Contractor. Storage of materials beyond the designated area will not be permitted.

C. Vehicular access to the site, and parking for employees' vehicles shall be restricted only to the specific areas designated by the Owner.

1.14 TEMPORARY SCAFFOLDING AND CONVEYANCES

A. Furnish, install, maintain, remove and pay for all temporary staging and planking, ladders, hoisting (including operator), rigging, and safety devices for all trades.

B. Staging shall be approved design, erected and removed by experienced stage builders and shall have all accident prevention devices required by state and local laws.

C. Permit no materials to be passed through the finished openings of exterior walls, without first providing protection to the opening thereof of a type as approved by the Engineer. Be responsible, and bear all costs, for repairs and/or replacement of damaged work caused thereby.

1.15 TEMPORARY PROTECTION

A. Furnish, erect, and maintain for the duration of the work period, temporary fire-retardant, dustproof coverings as required to prevent the spread of dust beyond the immediate area where work is being performed.

1. No painting during school hours.
2. No cutting, welding, asbestos abatement or demolition during school hours.
3. No rigging of equipment during school hours.
4. No power shutdowns during school hours.

B. Contractor shall cover and protect all school furnishings and equipment in each classroom while work is performed in that classroom.

1.16 ADVERTISING MATTER

A. Signs or advertisements will not be allowed on building enclosure or premises, unless written approval has been obtained from the Owner.

B. Advertising matter shall not appear on equipment, unless so specified. However, nameplates of a nominal size and inconspicuous nature will be permitted.

1.17 MUNICIPAL POLICE AND FIRE DEPARTMENT SERVICES

A. Make all necessary arrangements with the municipal police and fire departments in advance of times when regular off-duty, or reserve police officers or firemen will be needed for traffic control protection or fire watch, due to the operations performed under this Contract. Pay police officers and firemen at the prevailing wage rates in the municipality for such services. Extend the Workingmen's Compensation Insurance and Employer's Liability Insurance, required under the General Contract to cover police and firemen used on the project. Fire watch will be required during demolition of existing feed tank.

1.18 USE AND OCCUPANCY PRIOR TO ACCEPTANCE BY THE OWNER

A. The building will be occupied, for normal function thereof, during the stipulated construction period.

B. The Owner will, prior to any such partial occupancy, give notice to the Contractor thereof and such occupancy shall be predicated upon the following items:

1. In the case of partial occupancy prior to the stipulated completed date, the Owner shall secure endorsement from the insurance carrier and consent of the surety permitting occupancy of the building or use of the project during the remaining period of construction.

2. In the case of partial occupancy after the stipulated completion date, the Contractor shall extend all the necessary insurance coverage as stipulated until the date of final acceptance of the project is issued by the Owner. It is further noted that the use and occupancy prior to the formal acceptance does not relieve the Contractor of his responsibility to maintain the insurance coverage as required under the SUPPLEMENTARY CONDITIONS.

3. The one year guarantee period called for in the CONTRACT DOCUMENTS shall not commence until the date of Substantial Completion of all work under the Contract, as determined by the Engineer.

4. The occupancy of the building or any portion thereof by the Owner shall not constitute an acceptance of work not performed in accordance with the CONTRACT DOCUMENTS or relieve the Contractor of liabilities, to perform any work required by the Contract, but not completed at the time of occupancy.

1.19 GLASS BREAKAGE

A. The contractor shall be responsible for all breakage of glass as a direct or indirect result of his work or actions of his workmen, from the time the construction operations commence until the project is complete. Replace all broken glass and deliver the building with all glazing intact and clean.

1.20 DAMAGE TO EXISTING SURFACES

A. The Contractor shall be fully responsible for any damage to existing surfaces caused by the operations of this Contract, and shall correct all such damage to the Owner's satisfaction, at no additional cost to the Contract.

1.21 FINAL CLEANING

A. Before the final inspection, thoroughly clean the entire exterior and interior areas of the building where construction work has been performed, the immediate surrounding areas, and corridors, stairs, halls, storage areas, temporary offices and toilets, including the following:

1. Remove all construction facilities, debris, and rubbish from the Owner's property and legally dispose of same beyond the site limits.

2. Sweep, dust, wash, and polish all finished surfaces. This includes cleaning of the work of all finished trades where needed, whether or not cleaning for such trades is included in their respective SECTIONS.

END OF SECTION

DIVISION 1

SECTION 01310

SCHEDULE OF WORK

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. The Contractor, as a minimum, shall fulfill the Contract Schedule specified hereinafter.

B. Provide all necessary manpower, overtime work, materials and equipment, permits, etc., to complete the contract schedule. The building will be available as listed in Supplementary Conditions, Paragraph I: Working Hours. In general, buildings are available Monday through Friday, 3 p.m. to 11 p.m. Additional hours approved by the City and paid for by the contractor should be agreed to by the City of Newton.

C. All cutting in occupied areas shall be performed during unoccupied periods.

D. A legal means of egress shall be maintained during construction at all times.

E. During fire alarm drills, the Contractor shall immediately clear the area of work and provide complete safe access through the work area. Review this procedure with the Building Department and Fire Department.

1.02 CONTRACT SCHEDULE

A. Work under this contract shall commence on or about two (2) weeks after contract execution.

B. Work under this contract shall be substantially completed no later than 120 days after contract execution.

C. CCTV systems must be operational by May 20, 2011.

D. Work under this contract , including training shall be completed by June 3, 2011.

1.03 LIQUIDATED DAMAGES

A. The work shall be completed on or before said dates. In case the work embraced in this contract shall not have been completed due to the failure of the Contractor to complete the work or any part of the work within the time specified, the Awarding Authority shall recover as liquidated damages $1,000.00 per day for every day beyond the contract completion dates or completion dates as extended in accordance with Article 8.3 of A201-1997.

B. Owner and Contractor recognize that Owner will suffer financial loss if the work is not completed on schedule, thus, such liquidated damages for delay reflect an agreed upon approximation of loss suffered by Owner because of such delay and do not constitute a penalty.

1.04 MILESTONE AND PHASING SCHEDULE AT EACH SCHOOL

M-1	INITIATE CONTRACT	February 11, 2011
M-2	CONTRACT AWARD	February 11, 2011
M-3	ACCESS TO SCHOOL - Construction (Begin cabling and device installation)	February 22, 2011
M-4	CONTROLS AND WIRING COMPLETED	**May 2, 2011**
M-5	COMPLETE CCTV HEAD END INSTALLATION AND START-UP	**May 23, 2011**
M-6	CONSTRUCTION PORTION OF PROJECT COMPLETION	**May 27, 2011**
M-7	PROJECT ENTIRE COMPLETION INCLUDING TRAINING	**June 3, 2011**

END OF SECTION

SECTION 01400
ALTERNATES

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. The General Bidder shall be held fully responsible for examining the scope of the alternates generally defined herein and for recognizing any modifications to his work caused by any Alternate whether or not his particular trade SECTION is mentioned therein.

B. General Bidders shall enter a single amount in the appropriate space provided in the FORM FOR GENERAL BID which total amount shall consist of the amount for all work to be performed.

C. The work of the various trades to be performed under Alternates shall be in strict accordance with the requirements of the particular trade SECTION of the SPECIFICATIONS.

1.02 ALTERNATE NO. 1

A. Provide alternate to eliminate all CCTV cameras NOT indicated as Option #1.

END OF SECTION

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SECTION 280000

SECURITY SYSTEMS

PART 1 - GENERAL

1.00 GENERAL PROVISIONS

A. The GENERAL REQUIREMENTS, DIVISION 1, and BIDDING AND CONTRACT REQUIREMENTS, DIVISION 0, are hereby made a part of this Specification Section.

B. Examine all Drawings and all Sections of the Specifications and requirements and provisions affecting the work of this Section.

C. The security system contractor shall indemnify and hold harmless, to the fullest extent of the law, the owner, the architect, any of the architect's engineers and agents and employees from and against claims, damages, losses, and expenses.

1.01 SCOPE OF WORK

A. This project is for the installation of a new CCTV surveillance system within the existing Newton North High School and Newton South High School. The CCTV vendor/contractor shall funish and install new digital IP video camera equipment, cabling, pathways and associated accessories for a complete working system.

B. The work under this Section shall include the furnishing of all materials, labor, equipment and supplies and the performance of all operations to provide complete working systems, in general, to include the following items:

1. Provide a complete and operable building CCTV security system, including installation, testing, training as indicated in the contract documents:

2. Provide a building Closed Circuit Television (CCTV) system and associated infrastructure for surveillance services required to monitor and record events in all authorized spaces:

3. Provide CCTV surveillance integration with the existing level access control system.

4. Provide cabinets, racks, shelving, cable supports and cable management in the Security Control Room and remote telecom IDF rooms areas. All cabinets and rack systems shall be bonded to the telecommunication ground.

5. Provide an integrated Video Management System (VMS) for storage and manipulation of related database management information.

6. Provide vendor training and support to sufficiently educate administrators of the new system.

7. Conduct proper testing procedures and certifications for all elements of the scope of work described. Both soft and hard copy test result submissions are required to the Owner.

8. The work under this Section includes providing of all material, labor, equipment and supplies and the performance of all operations to provide a complete working Integrated Security CCTV System as required by the Drawings and details and as specified herein. Where the Drawings, Specifications, Codes, Regulations, Laws, or the requirements of the local Authority conflict, provide the higher quality and higher quantity indicated or required and follow the most strict requirement. In general, the work includes, but is not limited to, the following:

   a. Structured Cabling for CCTV Video Surveillance.

   b. Equipment Racks and Cabinets, where indicated.

   c. Cabling terminations for fiber, UTP coax and low voltage power.

   d. Conduit System and sleeves for Security System.

e. Protection of new and existing work.

f. Record Drawings and Documentation.

g. Staging.

h. Operation and Maintenance Instructions and Manuals for the Section's work.

i. Fireproofing of Penetrations and Openings.

j. Access panels and doors.

k. Phasing of work and maintenance of service to existing and temporarily relocated items, owner equipment or workstations, etc. as required to meet the project schedule.

l. Coordination with manufacturers, other trades and Owner.

m. Costs associated with core drilling and cutting and patching using appropriate and trained tradesmen approved by the Owner and the Engineer.

n. Cutting and Patching.

o. Removal and re-installation of ceiling tiles as required to install concealed cabling.

p. Integrated Security Video Management System, Graphic Designer System, Computers, Servers, Software, and licenses.

q. Integrated with existing Access Control System.

r. CCTV Video Surveillance System.

s. Administrative Display Consoles, recording devices and remote monitoring.

t. Controls, Amplifiers, and Terminal Equipment.

u. Power Supplies, UPS units.

v. Battery Backup and Redundant Backup.

w. Program Distribution System.

x. Programming.

y. Training and support.

z. Accessories.

aa. Identification.

bb. Wiring Devices and Plates.

cc. Sleeving.

dd. Fire Seal and Fireproof Sealant.

ee. Supervision and Approval.

ff. Testing.

gg. Operating and maintenance instructions and manuals.

hh. Coordination drawings.

ii. Shop drawings.

jj. Record (as-built) drawings.

1.02 RELATED WORK

A. Principal classes of Work related to the Work of this Section are listed in the Specification Table of Contents, and are specified to be performed under the indicated Sections of the Specifications. Refer to the indicated Sections for description of the extent and nature of the indicated Work, and for coordination with related trades. This listing may not include all related Work items. It is the responsibility of the Contractor to coordinate and schedule the Work of this Section with that of all other trades.

1.03 QUALIFICATIONS

A. The installer (Firm and Employees) shall be experienced in the operations they are engaged to perform. Demonstrate at least five years of continuous recent experience on similar projects. The installer shall hold and provide recent, up-to-date licenses, certifications and training certificates in the area the project is located and for the equipment to be installed.

B. The successful bidder shall be thoroughly familiar with the cabinet methods set forth in the latest release of the BICSI TDMM's (Building Industry Consulting Services International Telecommunications Distribution Methods Manuals) and unless otherwise specified, shall supervise the installation in accordance with the recommendations and practices outlined in the latest release of the BICSI Telecommunications Cabling Installation Manual.

C. Provide names of contacts from the last five similar projects including the general contractor, owner's representative, architect and engineer. Indicate project locations, scope and current phone numbers that the contacts can be reached at.

D. Qualified Security System installation firms shall have demonstrable design and installation training with certifications of competence. Certified training shall be industry recognized and at least equal to:

1. NICET Certified Designer and/or Building Industry Consulting Service International, Inc. (BICSI) Registered Communications Distribution Designer (RCDD).

2. NICET and/or Building Industry Consulting Service International, Inc. (BICSI) Registered Installer/Technician.

3. Approved Manufacturer's Certified Installer Program (Veritek, Axis, Lenell)

a. Each foreman and installer working on this project shall be trained and certified to the qualified level as specified by the manufacturer(s) for installation and maintenance of equipment being provided on this project. The training shall consist of at least a minimum of proper installation techniques of their specific equipment in order to have a complete operating system meeting or exceeding the requirements as specified herein. Each foreman and installer working on this project shall provide documentation from the manufacturer indicating that they have been adequately trained prior to the start of the project. Only foreman and installers who have been properly trained and documented by the manufacturer whose equipment is being provided on this project shall be allowed to install.

b. Maintain at the site, an updated copy of the Manufacturer Trained Installers list including a copy of their training documentation from the manufacturer. This documentation shall be made available to the architect upon request.

1.04 DEFINITIONS

A. As used in this Section, the following items are understood to have the following meaning:

1. ***"Contractor or Subcontractor or Sub-subcontractor or Systems Integrator"***, unless otherwise qualified, shall mean the installer of the work specified under this Section.

2. ***"Furnish"*** shall mean purchase and deliver to the project site, complete with every necessary appurtenance.

3. ***"Install"*** shall mean unload at the delivery point at the site and perform all work necessary to establish secure mounting and proper operation at the proper location in the project.

4. ***"Provide"*** shall mean "Furnish" and "Install".

5. ***"Work"*** shall mean all labor, materials, equipment, apparatus, controls, accessories and all other items required for a proper and complete installation.

6. ***"Concealed"*** shall mean hidden from sight in chases, furred-in spaces, shafts, hung ceilings, embedded in construction or in a crawl space. Areas to be concealed as part of tenant alterations to the building shall also be considered in this definition.

7. ***"Exposed"*** shall mean not installed underground or concealed as defined above.

8. ***"Furnished by Others"*** shall mean materials or equipment purchased under other sections of the general contract and installed by this section of the specifications by this trade contractor.

9. ***"Owners Representative"*** shall be the party responsible to make decisions regarding all contractual obligations in reference to the Scope of Work for the Owner.

10. ***"Date of Substantial Completion"*** shall indicate the date where the work has been formally accepted as evidenced by completed final punch list or where the work has reached the stage that the owner obtains beneficial use and commences utilization of the installed systems for business or occupancy purposes. The GENERAL REQUIREMENTS, DIVISION 1, shall supercede this definition where specifically defined.

1.05 CODES, REFERENCES AND PERMITS

A. Materials, installation of systems and equipment provided under this section shall be done in strict accordance with Massachusetts Department of Public Safety Codes, Massachusetts Department of Environmental Protection, Massachusetts State Building Code 780 CMR and any other Codes and Regulations having jurisdiction including but not limited to:

1. All Applicable NFPA Standards

2. Massachusetts Electrical Code (MEC)

3. Occupational Safety and Health Administration (OSHA)

4. State and Local Building Codes

5. Underwriters' Laboratories, Inc (UL294-Standard for Access Control Systems

B. Unless otherwise specified or indicated, materials, workmanship and equipment performance shall conform with the latest governing edition of the following standards, codes, specifications, requirements, and regulations, except when more rigid requirements are specified or are required by applicable codes but not limited to:

1. American National Standards Institute (ANSI)

2. American Society of Testing and Materials (ASTM)

3. Institute of Electrical and Electronics Engineers (IEEE)

4. Insulated Cable Engineers Association (ICEA)

5. National Electric Manufacturers Association (NEMA)

6. ANSI – American National Standards Institute

7. TIA/EIA – Telecommunications Industry Alliance/Electronics Industry Alliance

8. FCC – Federal Communications Commission

9. NEC – National Electric Code

10. NFPA 70 – National Fire Protection Association

11. ANSI/TIA/EIA-568-B.1 – Commercial Building Telecommunications Cabling

12. ANSI/TIA/EIA – 568-B.2- Commercial Building Telecommunications Cabling

13. ANSI/TIA/EIA-568-B.3 – Commercial Building Telecommunications Cabling

14. ANSI/TIA/EIA-569-A – Commercial Building Standard for Telecommunications Pathways and Spaces

15. ANSI/TIA/EIA-606 – The Administration Standards for the Telecommunications Infrastructure of Commercial Building

16. ANSI/TIA/EIA-607 – Commercial Building Grounding and Bonding Requirements for Telecommunications

17. FCC Part 15 (addresses electromagnetic radiation)

18. FCC Part 68 (connection of premise equipment and wiring to the network)

19. ANSI/ICEA – Insulated Cable Engineers Association

20. SP – Standards Proposal (EIA/TIA)

21. UL Compliance: The communication system supplied shall be listed by Underwriter's Laboratories under UL Standard 1459 (designation WYQQ on UL Listing Card) for Telephone Appliance and Equipment. A copy of the UL listing card for the proposed system shall be included with the contractor's submittal.

C. Give all notices, file all plans, obtain all permits and licenses, and obtain all necessary approvals from authorities having jurisdiction. Deliver all certificates of inspection to the authorities having jurisdiction. No work shall be covered before examination and approval by the Owner's Representative, inspectors, and authorities having jurisdiction. Replace imperfect or condemned work to conform to requirements, satisfactory to Owner's Representative, and without extra cost to the Owner. If work is covered before inspection and approval, this Contractor shall pay costs of uncovering and reinstalling the covering, whether it meets contract requirements or not.

1.06 GENERAL REQUIREMENTS

A. Nameplates

Each major component of equipment shall have the manufacturer's name, address, type or style, model or serial number, and catalog number on a plate secured to the equipment.

1.07 MATERIAL AND EQUIPMENT STANDARDS

A. Where equipment or materials are specified with the name of a manufacturer, such specification shall be deemed to be used for the purpose of establishing a standard for that particular item. No equipment or material shall be used unless previously approved by the Owner's Representative.

B. Substitutions may be offered for review provided the material, equipment or process offered for consideration is equal in every respect to that indicated or specified. The request for each substitution must be accompanied by complete specifications together with drawings or samples to properly appraise the materials, equipment or process. The contractor shall highlight and list all applicable specification requirements which the substituted material deviates from.

C. If a substitution of materials or equipment in whole or in part is made, this Contractor shall bear the cost of any changes necessitated by any other trade as a result of said substitution.

D. All materials, equipment and accessories provided under this section shall be new and unused products of recognized manufacturers as approved.

E. If three or more manufacturers are indicated without the term “or equal” to “or approved equal”, then the material and equipment shall be supplied by one of those indicated and that material and equipment shall conform in all respects to the Drawings and Specifications.

F. Provide products of one manufacturer for each classification of equipment.

1.08 SUBMITTALS

A. Conform to the requirements of **Division 1**, **General Conditions**, for schedule and form of all submittals unless specifically noted otherwise in this section. Coordinate this submittal with submittals for all other finishes. Shop drawings and design layouts shall be prepared by licensed installing contractors and shall note the name(s), license number(s) and license expiration date(s) of the contractor(s) installing electrical/security systems.

B. Definitions:

1. Shop Drawings are information prepared by the Contractor to illustrate portions of the work in more detail than indicated in the Contract Documents.

2. Acceptable Manufacturers: The mechanical design for each product is based on the single manufacturer listed in the schedule or shown on the drawings. In Part 2 of the specifications, certain Alternate Manufacturers are listed as being acceptable. In addition, the MATERIAL AND EQUIPMENT STANDARDS paragraph potentially allows for substitutions as being acceptable. These are acceptable only if, as a minimum, they:

a. Meet all performance criteria listed in the schedules and outlined in the specifications.

b. Fit within the available space it was designed for, including space for maintenance and component removal, with no modification to either the space or the product. Clearances to walls, ceilings, and other equipment will be at least equal to those shown on the design drawings. The fact that a manufacturer’s name appears as acceptable shall not be taken to mean the Engineer has determined that the manufacturer’s products will fit within the available space – this determination is solely the responsibility of the contractor.

c. Products must adhere to all architectural considerations including, but not limited to; being of the same color as the product scheduled or specified, fitting within the architectural enclosures and details, and for diffusers – being the same size and of the same physical appearance as scheduled or specified products.

C. Submittal Procedures, Format and Requirements

1. Review submittal packages for compliance with Contract Documents and then submit to Owner’s Representative for review. Submit enough sets of shop drawings such that, after review, two sets will be kept by the reviewer, with only the remaining sets returned with reviewer’s marks and comments.

2. Each Shop Drawing shall indicate in title block, and each Product Data package shall indicate on cover sheet, the following information:

a. Title

b. Equipment number

c. Name and location of project

d. Names of Owner, Engineer and Seller

e. Names of manufacturers, suppliers, vendors, etc.

f. Date of submittal

g. Whether original submittal or resubmitted

3. Shop Drawings showing manufacturer's product data shall contain detailed dimensional drawings (minimum ¼" – 1' scale) including plans and sections (where physical clearance could be an issue). Provide larger scale details as necessary.

4. Submit accurate and complete description of materials of construction, manufacturer's published performance characteristics, sizes, weights, capacity ratings (performance data, alone, is not acceptable), electrical requirements, starting characteristics, wiring diagrams, and acoustical performance for complete assemblies. Drawings shall clearly indicate location (terminal lock or wire number), voltage and function for all field terminations, and other information necessary to demonstrate compliance with all requirements of Contract Documents.

5. Provide Shop Drawings showing details of connections to all equipment. If connection details are not submitted and connections are found to be installed incorrectly, this contractor shall reinstall them within the original contract price.

6. Provide complete data for all auxiliary services and utilities required by submitted equipment. This shall include fuel, cooling and exhaust requirements and points of connections.

7. Provide a complete description of all controllers and instrumentation required including electrical power requirements for all components and detailed information on termination diagrams, and all control interfaces with a central control system.

8. Provide installation and erection information including; lifting requirements, and any special rigging or installation requirements for all equipment.

9. The Owner's Representative shall approve all materials before commitment for materials is made.

D. Product Data: Submit complete manufacturer's product description and technical information including:

1. Camera, Lens, Housings

2. Switching, Recording and Monitoring devices

3. Computers, Servers, and PC's

4. Power Supplies

5. Cabling Infrastructure

6. Patch Cords

7. Operating System Software

8. Networking LAN devices

9. System File Server and Workstation

10. Termination blocks

11. Battery Backup/UPS/Redundant Power System

12. Cable supports and management

13. Fire Seal and Fireproof Sealant

14. Seismic Restraints

15. Detailed riser diagrams of all security system components.

16. Detailed commissiong sequence of operation on how the system will be tested prior to final acceptance and during testing commissioning process with end user for final system acceptance.

17. Maintenance and Service agreement details along with a Sample Contract describing the Contractor's proposed scope of Maintenance and Services to be provided to the Owner after the warranty period has expired.

E. Submit shop drawings and product data grouped to include complete submittals of related systems, products and accessories in a single submittal. Clearly mark or highlight each product part number within each submittal.

1. Access panel shop drawings shall be submitted to the Construction Supervisor for approval.

2. Do not submit multiple product information in a single bound manual.

3. Three-ring binders shall not be accepted.

F. Deviations:

1. Concerning deviations other than substitutions proposed deviations from Contract Documents shall be requested individually in writing whether deviations result from field conditions, standard shop practice, or other cause. Submit letter with transmittal of Shop Drawings which flags the deviation to the attention of the Owner's Representative.

2. Without letters flagging the deviation to the Owner's Representative, it is possible that the Engineer may not notice such deviation or may not realize its ramifications. Therefore, if such letters are not submitted to the Owner's Representative, the Seller shall hold the Engineers, his consultants and the Owner harmless for any and all adverse consequences resulting from the deviations being implemented. This shall apply regardless of whether the Engineer has reviewed or approved shop drawings containing the deviation, and will be strictly enforced.

3. Approval of proposed deviations, if any, will be made at discretion of Engineer.

G. Schedule: Incorporate shop drawing review period into construction schedule so that Work is not delayed. This subcontractor shall assume full responsibility for delays caused by not incorporating the following shop drawing review time requirements into his project schedule. Allow at least 10 working days, exclusive of transmittal time, for review each time shop drawing is submitted or resubmitted with the exception that 20 working days, exclusive of transmittal time are required for the following:

H. Responsibility

1. Intent of Submittal review is to check for capacity, rating, and certain construction features. The contractor shall ensure that work meets requirements of Contract Documents regarding information that pertains to fabrication processes or means, methods, techniques, sequences and procedures of construction; and for coordination of work of this and other Sections. Work shall comply with approved submittals to extent that they agree with Contract Documents. Submittal review shall not diminish responsibility under this Contract for dimensional coordination, quantities, installation, wiring, supports and access for service, nor the shop drawing errors or deviations from requirements of Contract Documents. The Engineer's noting of some errors while overlooking others will not excuse the contractor from proceeding in error. Contract Documents requirements are not limited, waived nor superseded in any way by review.

2. INFORM SUBCONTRACTORS, MANUFACTURERS, SUPPLIERS, ETC. OF SCOPE AND LIMITED NATURE OF REVIEW PROCESS AND ENFORCE COMPLIANCE WITH CONTRACT DOCUMENTS.

I. In the event that the contractor fails to provide Shop Drawings for any of the products specified herein:

1. The contractor shall furnish and install all materials and equipment herein specified in complete accordance with these Specifications.

2. If the contractor furnishes and installs material and/or equipment that is not in complete accordance with these Specifications, he shall be responsible for the removal of this material and/or equipment. He shall also be responsible for the replacement of this material and/or equipment with material and/or

equipment that is in complete accordance with these Specifications, at the direction of the Owner's Representative.

3. Removal and replacement of materials and/or equipment that is not in complete compliance with these Specifications shall be done at no extra cost to the Owner.

4. Removal and replacement of materials and/or equipment that is not in complete compliance with these Specifications shall not be allowed as a basis for a claim of delay of completion of the Work.

J. Mark dimensions and values in units to match those specified.

1.09 OPERATION AND MAINTENANCE DATA

A. Commence preparation of the Operating and Maintenance (O&M) manuals immediately upon receipt of "Approved" or "Approved as Noted" shop drawings and submit each section within one month. The final submission shall be no later than two months prior to the projected date of Substantial Completion of the Project.

B. Submit O&M table of contents in the submittal phase. O&M manuals shall be built as submittals are accepted and shall include the individual equipment manufacturer's data retrieval sheet, as per Attachment A in Part IV for input into the Owner's Maintenance Management System. Form shall be provided and completed electronically.

C. Each O&M document shall include the manufacturer's web address for equipment specific O&M information for Internet access by the owner.

D. The manual shall consist of three (3) sets of manuals and include three (3) sets of CDs, which shall contain the scanned content of the entire manual. The manual shall highlight the actual equipment used and not be a master catalog of all similar products of the manufacturer. The manual shall be submitted for review prior to creation of the CDs.

E. The Manual shall contain the following:

1. Operations Manual

a. Systems description including all relevant information needed for day-to-day operations and management.

b. Wiring diagrams, schematics, logic diagrams and sequence of operations that accurately depict the system.

c. Depiction of each interface screen where programmable logic and visual displays are provided. Descriptors shall be provided to define displayed data, alarms, etc.

d. A single sheet (for ease of removal) of all access codes and passwords necessary to access all levels of control and programming.

e. Trouble shooting guide defining common alarms/problems with possible cause and effect.

2. Maintenance Manual

a. Define all maintenance activities required to ensure system operation within manufacturers specified parameters. Provide table of all required activities plotted vs. interval with adequate fill-in-space for "activity completion date" and "comments". Where multiple instrument readings are required, provide data sheet formatted to accommodate activity.

b. Define recommended spare parts inventory with part numbers and source defined for ordering by the Owner. Identify lead time on all parts, source location and cost.

c. Provide copy of all warranty information with associated date of substantial completion (commencement of warranty) and end date of coverage. Define all components/subsystems specifically included and excluded.

d. Provide all information as listed on the facility support services data sheet as per attachment A in Part IV for input into the owner's maintenance management system. Form shall be provided and completed electronically.

e. Provide O&M manuals for each of the following:

1) CCTV System

2) Battery/UPS Backup System

3) Maintenance and Service Agreement

1.10 RECORD DRAWINGS

A. Refer to DIVISION 1, General Conditions, for record drawings and procedures to be provided under this section, unless specifically noted otherwise in this section.

B. Record Drawings (red-line drawings) will be updated by this Contractor daily for review with the monthly requisition. The record drawing shall be an accurate depiction of the systems as completed, including dimensions (vertical/horizontal) of concealed components off fixed building elements.

C. The Foreman shall maintain complete and separate set of prints of Contract Drawings at job site at all times and shall record work completed and all changes from original Contract Drawings clearly and accurately including work installed as a modification or addition to the original design.

D. At completion of work the Contractor shall prepare a complete set of record drawings on AutoCAD showing all systems as actually installed. The Architectural background AutoCAD files will be made available for the contractor's copying, at his expense, to serve as backgrounds for the drawings. The Contractor shall transfer changes from field drawings onto AutoCAD drawings and submit copy of files and three sets of prints to Owner's Representative for comments as to compliance with this section. CADD layering as established by the A&E design team shall be maintained with any and all changes done by the contractor.

E. The Architect and Engineer are not granting to the Contractor any ownership or property interest in the CADD Drawings by the delivery of the CADD Disks to the Contractor. The Contractor's rights to use the CADD disks and the CADD drawings are limited to use for the sole purpose of assisting in the Contractor's performance of it contractual obligations under its contract with respect to the Project. The Architect and Engineer are granting no further rights. Any reuse or other use the Contractor will be at the Contractor's sole risk and without liability to the Architect and Engineer. The Contractor hereby waives and releases any losses, claims, damages, liabilities of any nature whatsoever, and costs (including attorney fees) arising out of, resulting from, or otherwise related to the use of the CADD Disks and CADD Drawings by the Contractor. The Contractor, to the maximum extent permitted by law, hereby agrees to indemnify, defend and hold the Architect and Engineer harmless from all loses, claims, damages, liabilities, and costs (including attorney fees) arising out of, resulting from, or otherwise related to the use of the CADD Disks and CADD Drawings by the Contractor.

F. Record Drawings, shall show "as-built" condition of details, sections, riser diagrams, control changes and corrections to schedules. Schedules shall show actual manufacturer and model numbers of final equipment installation.

G. The Contractor shall submit the record set for approval by the engineer a minimum of four weeks prior to seeking the permanent certificate of occupancy.

1.11 WARRANTIES

A. Submit manufacturer's standard replacement warranties for material and equipment furnished under this Section. Such warranties shall be in addition to and not in lieu of all liabilities which the manufacturer and the Telecommunication contractor may have by law or by provisions of the Contract Documents.

B. All materials, equipment and work furnished under this Section shall be guaranteed against all defects in materials and workmanship for a minimum period of three years (3) commencing with the Date of Substantial Completion. Where individual equipment sections specify longer warranties, provide the longer warranty. Any failure due to defective material, equipment or workmanship which may develop, shall be corrected at no expense to the Owner including all damage to areas, materials and other systems resulting from such failures.

C. Guarantee that all elements of each system meet the specified performance requirements as set forth herein or as indicated on the Drawings.

D. Upon receipt of notice from the Owner of the failure of any part of the systems during the warranty period, the affected parts shall be replaced. Any equipment requiring excessive service shall be considered defective and shall be replaced.

1.12 COORDINATION

A. Refer to Division 1, General Conditions, for coordination requirements applicable to this section, unless specifically noted otherwise in this section.

B. Materials and apparatus shall be installed as fast as conditions of the building will permit and must be installed promptly when and as required.

C. Confer with all other trades relative to location of all apparatus and equipment to be installed and select locations so as not to conflict with work of other Sections. Any conflicts shall be referred immediately to the Owner's Representative for decision to prevent delay in installation of work. All work and materials placed in violation of this clause shall be readjusted to the Owner's Representative's satisfaction at no expense to the Owner.

D. Where work of this section will be installed in close proximity to work of other sections or where there is evidence that the work of this section may interfere with work of other sections, assist in working out space conditions to make satisfactory adjustment. Prepare and submit for approval 3/8" scale or larger working drawings and sections, clearly showing how the work is to be installed in relation to the work of other sections.

E. Keep fully informed as to the shape, size and position of all openings required for all apparatus, conduit, cable, sleeves, etc., and give information in advance to allow construction of required openings. Furnish all sleeves, pockets, supports and incidentals, and coordinate with the General Contractor for the proper setting of same.

F. All distribution systems which require pitch or slope such as condensate drains and water piping shall have the right of way over those which do not. Confer with other trades as to the location of pipes, ducts, lights and apparatus and install work to avoid interferences.

G. This Contractor shall, with the approval of the Owner's Representative and without extra charge, make reasonable modifications in his work as required by normal structural interferences, or by interference with work of other trades, or for proper execution of the work.

1.13 INTERPRETATION OF DRAWINGS AND SPECIFICATIONS

A. It is the intention of the Specifications and Drawings to call for complete, finished work, tested and ready for continuous operation. Any apparatus, appliance, material or work not shown on the Drawings, but mentioned in the Specifications or vice-versa, or any incidental accessories necessary to make the work complete in all respects and ready for operation, even if not particularly specified, shall be provided by this Contractor without additional expense to the Owner.

B. The Drawings are generally diagrammatic. The locations of all items that are not definitely fixed by dimensions are approximate only. The exact locations must be determined at the project and shall have the approval of the Owner's Representative before being installed. This Contractor shall follow Drawings, including his shop drawings, in laying out work and shall check the Drawings of other trades to verify spaces in which work will be installed. Maintain maximum headroom and space conditions. Where space conditions appear inadequate, notify the Owner's Representative before proceeding with the installation. This Contractor shall, without extra charge, make reasonable modifications in the layout as needed to prevent conflict with work of other trades or for proper execution of the work.

C. Any requests for information (RFI) for resolving an apparent conflict or unclarity, or a request for additional detail, shall include a sketch or equivalent description of contractors proposed solution.

D. Size of conduits, cable trays, raceways and methods of running them are shown, but it is not intended to show every offset and fitting, nor every structural difficulty that may be encountered. To carry out the true intent and purpose of the Drawings, all necessary parts to make complete approved working systems ready for use, shall be furnished without extra charge. All work shall be installed in an approved workmanlike manner.

1.14 INSPECTION OF SITE CONDITIONS

A. Prior to submission of bid, visit the site and review the related construction documents to determine the conditions under which the Work has to be performed and send a report, in writing, to the Owner's Representative, noting any conditions which might adversely affect the Work of this Section of the Specifications.

1.15 SURVEY AND MEASUREMENTS

A. Base all required measurements, horizontal and vertical, from referenced points established with the Owner's Representative. The Electronic Security System Contractor shall be responsible for correctly laying out the Work required under this Section of the Specifications.

B. In the event of discrepancy between actual measurements and those indicated, notify the Owner's Representative in writing and do not proceed with the related work until instructions have been issued.

1.16 DELIVERY, STORAGE AND HANDLING

A. No materials shall be delivered or stored on site until corresponding Shop Drawings have been approved.

B. All manufactured materials shall be delivered to the site in original packages or containers bearing the manufacturer's labels and product identification.

C. Protect materials against dampness. Store off floors, under cover and adequately protected from damage.

D. Inspect all equipment and materials, upon receipt at the job site, for damage and conformance to approved shop drawings.

1.17 PROTECTION OF WORK AND PROPERTY

A. This Contractor shall be responsible for the care and protection of all work included under this Section until the completion and final acceptance of this Contract.

B. Protect all equipment and materials from damage from all causes including, but not limited to, fire, vandalism and theft. All materials and equipment damaged or stolen shall be repaired or replaced with equal material or equipment at no additional cost to the Owner.

C. Protect all equipment, outlets and openings with temporary plugs, caps and covers. Protect work and materials of other trades from damage that might be caused by work or workmen under this Section and make good damage thus caused.

D. Damaged materials are to be removed from the site; no site storage of damaged materials will be allowed.

1.18 SUPERVISION

A. Supply the service of a competent Supervisor with a minimum of 5 years experience in Security System construction supervision who shall be in charge of the Security System work at the site.

1.19 SAFETY PRECAUTIONS

A. Life safety and accident prevention shall be a primary consideration. Comply with all of the safety requirements of the owner and OSHA throughout the entire construction period of the project.

B. Furnish, place and maintain proper guards and any other necessary construction required to secure safety of life and/or property.

1.20 SCHEDULE

A. Construct work in sequence under provisions of Division 1 and as coordinated with the Owner's Representative.

B. Continuity of all services shall be maintained in all areas that will be occupied or temporarily relocated during the construction period. If an interruption of service becomes necessary, such shall be scheduled in advance, made only upon consent of the Owner and at a time outside normal working hours as the Owner shall designate.

C. Refer to the overall scheduling of the work of the project. Schedule work, process Submittals and order materials and equipment to conform to this schedule and install work to not delay nor interfere with the progress of the project.

D. Inform General Contractor and Architect immediately of any delays or potential delays. Furnish manufacturer's letter to verify order date, equipment delays, expected shipment date, order number, and potential remedies to speed up delivery. Any costs to speed up delivery shall be implemented at no cost to the project if the equipment or material was not ordered as soon as possible after Contract award or within the time frames indicated with the Submittals.

E. Include premium time required to comply with the project scheduling and phasing.

F. Be aware of, and plan for, project scheduling and phasing. Provide for complete continuous operation of all systems. Coordinate scheduling and phasing with the Architect, Owner, other Trades, and the General Contractor.

G. Demolition of existing systems being updated or replaced shall take place only after the new or replacement system is completely installed, operational, tested and certified. This work may be required on a "per-phase" basis.

H. Coordinate the work of this Section with the respective trades responsible for installing interface work, and ensure that the work performed hereunder is acceptable to such trades for the installation of their work.

1.21 HOISTING, SCAFFOLDING AND PLANKING

A. The work to be done under this Section of the Specifications shall include the furnishing, set-up and maintenance of all derricks, hoisting machinery, cranes, helicopters, scaffolds, lifts, staging and planking as required for the work.

1.22 CUTTING AND PATCHING

A. Provide all cutting and patching necessary for the proper installation of work to be performed under this Section.

B. All work shall be fully coordinated with all phases of construction, in order to minimize the requirements for cutting and patching.

C. Form all chases or openings for the installation of the work of this Section of the specifications, or cut the same in existing work and see that all sleeves or forms are in the work and properly set in ample time to prevent delays. Be responsible that all such chases, openings, and sleeves are located accurately and are of the proper size and shape and consult with the Owner’s Representative band all other trades concerned in reference to this work. Confine the cutting to the smallest extent possible consistent with the work to be done. In no case shall piers or structural members be cut without the approval of the Owner’s Representative.

D. Fit around, close up, repair, patch, and point around the work specified herein to match the existing adjacent surfaces and to the satisfaction of the Owner’s Representative.

E. Fill and patch all openings or holes left in the existing structures by the removal of existing equipment which is part of this Section of the Specifications.

F. All of this work shall be carefully done by workmen qualified to do such work and with the proper and smallest tools applicable.

G. Any cost caused by defective or ill-timed work required by this Section of the specifications shall be borne by this Contractor.

H. When, in order to accommodate the work required under this Section of the specifications, finished materials of other trades must be cut or fitted, furnish the necessary drawings and information to the trades whose materials must be cut or fitted.

1.23 SUPPLEMENTARY STEEL, CHANNELS AND SUPPORT

A. Supplementary steel and factory fabricated channels shall be firmly connected to building construction in a manner approved by the Owner's Representative as shown on the drawings or herein specified.

B. The type and size of the supporting channels and supplementary steel shall be determined by the Contractor and shall be of sufficient strength and size to allow only a minimum deflection in conformance with the manufacturer's requirements for loading.

C. All supplementary steel and factory fabricated channels shall be installed in a neat and workmanlike manner parallel to the walls, floors and ceiling construction. All turns shall be made with 90 degree and 45 degree fittings, as required to suit the construction and installation conditions.

D. All supplementary steel including factory fabricated channels, supports and fittings shall be galvanized steel, aluminum or stainless steel where exposed or subject to rust producing atmosphere. Factory fabricated channels shall be manufactured by Unistrut, H-strut, Powerstrut or approved equal.

1.24 HAZARDOUS MATERIALS

A. Removed batteries shall be recycled by a facility approved by the owner's representative. A uniform hazardous waste manifest shall be prepared for all disposals and returned with all applicable signoffs prior to application for final payment.

B. Fiberoptic cable shall be separated from general waste.

C. A uniform hazardous waste manifest shall be prepared for all disposals and returned with all applicable signoffs prior to application for final payment. All handling shall conform to EPA requirements. Provide breakout cost for this scope.

D. Where it has been identified that asbestos-containing material exists within the scope limits, refer to the Asbestos Abatement specification section for requirements.

1.25 ACCESSIBILITY

A. All work provided under this Section of the Specification shall be installed so that parts requiring periodic inspection, maintenance and repair are accessible. Work of this trade shall not infringe upon clearances required by equipment of other trades, especially code required clearances to electrical gear. Minor deviations from the drawings may be made to accomplish this, but changes of substantial magnitude shall not be made prior to written approval from the Owner's Representative.

1.26 SEISMIC RESTRAINT REQUIREMENTS

A. Submit working plans and calculations reviewed, signed and stamped by a professional engineer who is registered in the State where the project is located and has specific experience in seismic calculations, certifying that the plans meet all seismic requirements established by authorities having jurisdiction over the project.

B. For each seismic restraint, provide certified calculations to verify adequacy to meet the following design requirements:

1. Ability to accommodate relative seismic displacements of supported item between points of support.

2. Ability to accommodate the required seismic forces.

C. For each respective set of anchor bolts provide calculations to verify adequacy to meet combined seismic-induced sheer and tension forces.

D. For each weldment between structure and item subject to seismic force, provide calculations to verify adequacy.

E. Restraints shall maintain the restrained item in a captive position without short circuiting the vibration isolation.

1.27 PROJECT CLOSEOUT

A. Certificates of Approval

1. Upon completion of all work, provide certificates of inspections from the following equipment manufacturers stating that the authorized factory representatives have inspected and tested the operation of their respective equipment and found the equipment to be in satisfactory operating condition and installed per the manufacturers installation instructions and requirements.

   a. CCTV and Recording System

   b. Operation and Maintenance Instructions and Manuals

   c. Record drawings

   d. Manufacturer Warranty

B. Construction Observations by the Engineer

1. The engineer is contracted to make **two** progress site visits during construction, **one** substantial completion (punch list) site visit for determining substantial completion and **one** Final site visit to determine if all work is complete.

2. The Trade Contractors and the General Contractor are required to inspect their own work and make any corrections to the work to comply with the specifications and the contract documents. It is not the responsibility of the engineer to develop lists of incomplete work items.

3. Progress Site Visits

   a. The purpose of the progress site visit by the engineer is to observe if the work is proceeding in accordance with the contract documents.

   b. The engineer will prepare a field report which will note in general the work completed since the last observation visit, work found not to be in accordance with the contract documents and work not corrected since the previous observation visit.

C. Substantial Completion

1. When the Contractor considers the Work under this Section is substantially complete, the Contractor shall submit written notice, through the Engineer, with a detailed list of items remaining to be completed or corrected and a schedule of when each remaining work item will be completed. Should the engineer determine the list of remaining work does not constitute substantial completion the engineer will notify the Owner and he will not make a substantial completion site visit.

2. The following items shall be completed prior to the written request for substantial completion site visit:

   a. Certification of successful operation of all systems

   b. Training of the owner's personnel in the operation of the systems

   c. Record Drawings in accordance with the contract specifications

   d. Operation and Maintenance manuals

   e. Testing reports

   f. Manufacturer's certificates of approvals, extended warranty

   g. Emergency contact list for reporting of malfunctioning equipment during the warrantee period

   h. Contractors Project Completion certificate

3. Should the Engineer, during the substantial completion visit, observe that the Work is substantially complete, s/he will provide a written listing of the observed deficiencies referred herein as the Punch List. The Punch List will provide for a place for the Contractor to sign off and date each item individually indicating that the observed deficiency item has been corrected.

4. Should the Engineer, during the substantial completion site visit, observe that the Work is not substantially complete, s/he will provide, a written list of the major deficiencies and a reason for the work not being considered substantially complete.

5. If the work is found not to be substantially complete then the engineer shall be reimbursed for his time to reobserve the work. A reobservation fee shall be charged to the Contractor through the contractual agreement for any further observations by the engineer.

6. The Contractor shall remedy all deficiencies listed in the punch list within the time frame required by the contract.

D. Engineers Construction Completion Certification

1. Where required by the applicable code, the Engineers Construction Completion Certification will be issued by RDK Engineers when all required functional tests are complete and all reports are complete. The following is a minimum listing of the required systems to be tested with reports generated indicating they are complete and ready for use:

   a. CCTV and Recording System

2. There shall be NO outstanding items identified on the punch list for scope within any of these categories.

E. Final Completion

1. The following items shall be submitted prior to the written request for Final completion:

   a. Revised Substantial Completion items to be resubmitted in accordance with the review process comments

   b. Warranties commencing the date of Substantial completion

   c. Individual Signed and dated Punch List acknowledging completion of all punch list items

2. When the Contractor considers all of the punch list work items complete, the Contractor shall submit written notice through the Engineer that all Punch List items are complete and resolved and the work is ready for final observation site visit. The signature lines for completion of each punch list item shall be signed by the Contractor indicating the work is complete and signed by the General contractor indicating s/he has inspected the work and found it to be complete. Should the Engineer find the work to be finally complete and all Punch List items are complete the Engineer will make a recommendation to the Owner. If the Engineer has found the punch list work to be incomplete during final inspection a written listing of the observed deficiencies will be prepared by the Engineer.

3. If the work is not fully complete then the engineer shall be reimbursed for his time to reobserve the work. A reobservation fee shall be charged to the Contractor through the contractual agreement for any reobservations by the engineer.

F. Re-observation Fees

1. The re-observation fee shall be $1200.00 per visit.

G. Contractor's Project Completion Certificate

1. Upon completion of work and prior to request for Certificate of Occupancy, each Trade Contractor and the General Contractor shall issue a certificate stating that work has been installed generally consistent with construction documents and all applicable codes. RDK Engineers can furnish a blank contractor's certificate form upon request. The certificate shall certify:

   a. Execution of all work has been in accordance with the approved construction documents.

   b. Execution and control of all methods of construction was in a safe and satisfactory manner in accordance with all applicable local, state and federal statutes and regulations.

2. The certificate shall include the following information:

   a. Project

   b. Permit Number

   c. Location

   d. Construction Documents

   e. Date on Plans and Specifications submitted for approval and issuance of the Building Permit

   f. Addendum(a) and Revision Dates

3. The certificate shall be signed by the Contractor and include the following:

   a. Signature

   b. Date

   c. Company

   d. License Number

   e. License Expiration Date

PART 2 - PRODUCTS

2.00 GENERAL

A. All devices shall comply with ANSI/TIA/EIA 568-B.1, B.2, B.3 standard including all Addendums.

B. The wiring configuration for all telecommunications devices shall be T568-B.

C. Manufacturer and part numbers are indicated throughout the specification to establish quality and performance characteristics of individual products. Any deviation from the specified manufacturers shall be noted as such on the product submittal and as referenced on the approved list of manufacturers provided by the Client.

   Acceptable Manufacturers of Equipment:

   1. Cameras: Verint, Axis, Vicon, Avigilon, Bosch.

   2. Video Recorders: Verint, Axis, Vicon, Avigilon, Bosch.

   3. Monitors: Verint, Pelco, Integral Technologies.

   4. Faceplates: Hubbell, Ortronics, Panduit, or approved equal.

   5. Modular Inserts: Hubbell, Ortronics, Panduit, or approved equal.

   6. Copper Cabling: Berk-Tek, Belden, Commscope, Mohawk or approved equal.

   7. Patch Panels: Hubbell, Ortronics, Panduit, or approved equal.

   8. Cable Supports: Erico, Chatsworth, Caddy or approved equal.

   9. Cable Management: Hubbell, Ortronics, Panduit, or approved equal.

D. If the Contractor wishes to use materials or equipment other than those specifically designated herein as being equal to those so specifically designated, he/she shall submit the proposed substitution before purchasing and/or fabrication in accordance with the requirements for the general conditions for approval.

2.01 VIDEO SURVEILLANCE EQUIPMENT

A. GENERAL REQUIREMENTS

1. Software - All software, IP video cameras, and components used to encode, decode and record, shall be provided by a single manufacturer.

2. Warranty - All serves, workstations and RAID controllers shall be provided with a three (3) year on site manufacturer supported warranty. Hard drives shall be provided with a (1) year warranty.

3. Department of Homeland Security Certification – It is recommended that the networked video solution be certified by the United States Department of Homeland Security (DHS) as an anti-terrorism technology and meet the qualifications outlined in the Support Anti-terrorism by Fostering Effective Technologies Act (SAFETY Act) of 2002.

4. VMware Validation Testing - The Digital Video Management Software manufacturer shall provide proof of successful validation testing for VMware ESX V3.5 U4. Test shall include the following software; Master Server application, Recording Server application and Master Recording Server Application.

B. CCTV SYSTEM OVERVIEW

1. VMS Server Components - The video systems software and hardware shall be multicast enabled and approved for use in a multicast environment. Video surveillance system shall have the capability to be integrated with Intrusion Detection and Access Control systems. The system shall have the ability to integrate with wireless and wired networks and provide video through Media Gateway service with transcoding capabilities for low bandwidth connections.

2. The system shall include a Master Server, with software and license, for each school.

3. The system shall include External Storage Array for each school.

4. The system shall include Recorder, for each school.

5. VMS Recorders shall store video on Commercial Off-The-Shelf (COTS) equipment using hard drives as storage medium. The recorders also shall have the capability to support the attachment of external storage devices.

6. VMS Recorder Server shall have the ability to run Master Server functions, Recording and the Review application simultaneously for cost-effective deployments.

7. The VMS Client Components shall include Review client software for each school. The VMS shall include a Review client application to operate and view live/recorded video.

8. Provide networking switches and UPS units as indicated on drawings for a complete system.

9. CCTV cameras shall be IP Indoor and Outdoor Cameras.

2.02 NETWORKING ETHERNET SWITCHES

a. Network Switches will be provided by this contractor. Switches shall be Power over Ethernet, PoE and required for interior and exterior cameras. Exterior cameras require additional power supply for heater as noted in the parts list. Network Switch

1) The network switch shall provide network data communication between recorder components, IP peripherals, and client computers.

2) Minimum specifications:

a) Data rate: 100 Mbps Ethernet

b) Duplex: Half/Full

c) Connectors: RJ-45

d) Operating temperature: 32 to 104 degrees F

e) Operating humidity: 10% to 80% non-condensing

f) Network Switch shall be manufacturerd by Dell, 24-port 100BASE-T PoE Switch or approved equal.

g) Provide one Network GBIC multimode fiber module per switch.

h) Fiber switch in each MDF room shall be Cisco P/N MDS9124.

2.03 FLAT-PANEL MONITORS

1) The monitor shall provide VGA display for operation and control of the system.

2) Minimum specifications:

a) Screen size: 19 inches

b) Display type: LCD

c) Contrast ratio: 500:1

d) Native resolution: 1280x1024

e) Response time: 12ms

f) Brightness (typical): 300

g) Signal connector: VGA

h) Acceptable manufacturers:

i) Dell Precision T3500 or approved equal

2.04 CAMERAS (INDOOR)

A. Indoor cameras shall consist of the following:

1. The Indoor Dome IP Camera shall process and compress video images into digital data files utilizing H.264, MPEG4 and MJPEG compression technologies. The camera shall integrate with Verints Nextiva VMS, and shall be available in a variety of popularly used form factors.

a) Provide H.264 compression

b) Provide MPEG4 compression

c) Provide MJPEG compression

d) Provide up to 4 separate streams of compressed video

e) Be capable of accepting power at 12VDC or Power-over-Ethernet (POE)

f) Support bi-directional audio

g) Support on-board storage via SD/SDHC card

h) Provide resolution options from 320 x 240 pixels at 30 fps to 1600 x 1200 pixels at 15 fps

i) Provide full-time analog video out in either NTSC or PAL formats

j) Include a 3 axis gimbal for proper image alignment in multiple applications and environments

k) Include a megapixel-rated wide Varifocal lens

l) Removeable IR cut filter for low-light performance and IR illumination support

2. The IP Camera shall utilize an embedded stable OS that resides on on-board non-volatile flash memory. It shall not reside on internal or external Hard Disk Drives. The camera shall not use a standard PC based OS and should not require constant virus or OS patch management for proper security protection

3. The IP camera shall have a megapixel-rated wide Varifocal lens

4. The camera shall be capable of surface mounting to a wall or ceiling

5. The camera shall have an available mounting kit for recess mounting into a wall or ceiling

6. The IP camera shall be able to use H.264 compression for the transmission of video to the camera's storage or to any remote authorized system to which the camera is connected.

7. The H.264 video compression engine shall use Context Adaptative Variable Length Coding (CAVLC) for all recorded video.

8. Compression quality shall be selectable with a minimum of five levels that can be programmed to maximize operational storage requirements.

9. The camera shall be capable of four (4) discrete streams in total, of which a maximum of 2 compression types can be set of H.264, MPEG4 and MJPEG

10. The camera shall use a 1/3" CMOS imager

11. The camera shall provide a minimum resolution support of 320 x 240 expandable to 1600 x 1200 pixels

12. The camera shall be able to record on a user-supplied SD/SDHC card properly inserted into the camera's SD/SDHC slot and not exceeding 8 GB in total card capacity

13. The camera shall be able to record to the card at any one of a number of profiles, including timed recording, record upon event or record upon command from an integrated management and recording system

14. The camera shall be able to record on the card as a constant overwrite or to stop recording when the card is full and notify the administrator that the card is full

15. The camera shall use an Unalterable Image Format to maintain the security and integrity of the digital video files.

16. The camera shall use Secure Socket Layer (SSL) protocol to communicate configuration information to associated NVRs and DVRs.

17. The camera shall support the 802.1X network tamper trap standard

18. Camera shall be remotely controllable and configurable.

19. The analog out function shall be controllable between NTSC and PAL from a DIP switch located on the camera body

20. The camera shall include LED or other indication on the body of the camera that indicates the power and network status of the camera, including error modes.

21. The camera shall include an Ethernet port for the purpose of communicating to and from the camera and for the purpose of receiving one or more digital, compressed video streams.

22. The camera shall include an analog 1 Volt peak-to-peak, 75 ohm coaxial video output that can be converted to a standard BNC connection.

23. The camera shall include a dry contact alarm in.

24. The camera shall include a dry contact alarm out (relay out).

25. The alarm input(s) and output(s) shall be programmable via the camera interface to determine if the input(s) and output(s) normal state is "Normally Open" (NO) or "Normally Closed" (NC).

26. Network: The camera shall include one Ethernet 10/100 base T ports for TCP/IP LAN/WAN connectivity.

27. The camera shall be programmable for static or dynamic (DHCP) IP addressing.

28. The camera shall support the following protocols: IPv4, IPv6, TCP/IP, UDP/IP HTTP, HTTPS, UPnP, RTSP/RTP/RTCP, IGMP, SMTP, FTP,DHCP, NTP, DNS, DDNS, , CoS, QoS, SNMP and 802.1X

29. The camera shall support multiple simultaneous user connections and operation for accessing live and recorded video.

30. All camera functions shall be supported by the client web interface including but not limited to:

a) Ability to change the network configuration of the camera, including IP address, gateway and port information, transmission protocols, security protocols and other values pertaining to standard network configuration

b) Simple video stream viewing via the web client

c) Ability to change compression type between H.264, MPEG-4 and MJPEG

d) Ability to adjust compression level

e) Ability to adjust frame rate

f) Ability to adjust traditional CCTV camera settings

g) Network Throttling

h) Password Management

i) Camera title

j) Motion detection control

31. The camera shall be compliant and available for optional system management software support. The system management optional software shall provide for health checks, device status log information, camera input status, firmware upgrades, password management and other system wide functions.

32. Indoor cameras, shall be manufactured by Verint P/N S5003FDW-DN or approved equal.

33. Provide one camera software license for each camera manufactured by Verint P/N NEX-6.1-1CAM-S or approved equal.

2.05 CAMERAS (OUTDOOR)

A. Outdoor cameras shall consist of the following:

1. Wall mounted.

2. High Definition 2.0 megapixel, H.264, weather proof to meet environmental conditions.

3. Fixed Dome shall be Vandal Resistant

4. Color shall be White.

5. Cameras shall be CMOS sensor, 3 to 9mm lens with IR cut filter for true day/night Ethernet IP Based.

6. Operating voltage of PoE.

B. Outdoor camera shall be manufactured by Verint P/N S5020FDW-DN or approved equal.

1. Provide 12VDC ENERGY STAR power supply for each exterior POE camera Verint P/N PS122 or approved equal.

2.06 MOUNTS

A. Interior camera mounting shall be accomplished with the following:

1. In-Ceiling, Surface, Wall, mounted.

B. Exterior camera dome mounts shall be medium/heavy duty designed, specifically for mounting to poles and/or building structures. Mounts shall include all necessary mounting fittings, integral power transformer and accessories for complete installation.

1. Dome mount enclosure, shall be manufactured by Verint P/N PM-S50FDW or approved equal. Wall mount gooseneck for fixed dome cameras shall be Verint P/N WM-S50FDW or approved equal.

2.07 VIDEO MANAGEMENT SYSTEM

A. VMS FUNCTIONS - The video systems software and hardware will be multicast enabled a approved for use in a multicast environment. Video surveillance system shall have the capability to be integrated with Intrusion Detection and Access Control systems. The VMS shall have the ability to integrate with wireless and wired networks and provide video through a Media Gateway service with trans coding capabilities for low bandwidth connections.

1. The VMS shall have a Control Center graphical user interface (GUI) that allows the user to quickly configure and apply the following parameters:

a) All cameras configurations

b) All recorder configurations

c) All work schedules

d) Create schedules and apply them to specific camera groups

e) Configure cameras and recorders individually and as a group in system components

2. The user shall have the ability to add and edit interactive site plans and Maps.

3. VMS shall have a Review GUI which will allow users to view live video, retrieve recorded video, and export video from a workstation PC.

4. VMS Review application shall enable users to manage multiple windows and perform multiple tasks simultaneously, including the following:

a) Select time preference format AM/PM or 24H

b) Quick video query button

c) Hot function keys

d) 8x Playback

e) 8x Playback

f) Change Camera Name

g) Retain Time Between Queries

h) Viewing live or recorded video in multiple windows, including video from multiple digital video recorders and multiple sites

i) Control PTZ cameras

j) Export video to digital media output device such as a CDor DVD

k) Submit and manage multiple requests for video

l) Support for time synchronized play back of video on up to 16 windows

m) Support for camera groups and maps

n) Support for camera presets in a user-defined, multi-level tree structure. The following guidelines will apply:

i. Each group has a user-defined name and user-defined contents.

ii. A group can contain cameras and/or other groups.

iii. Users can define multiple levels of groups and maps.

iv. A camera can be included in more than one group.

v. Users can select or drag-and-drop individual cameras to request video for playback or to open live video windows

5. VMS will allow the user to open, move, and size multiple independent video windows as needed

a) Single window

b) 2 x 2 windows arranged in two rows of two windows each

c) 5 x1 windows arranged in one large window, surrounded by multiple tiles

d) Quad: 4 windows arranged in two rows of two windows each

e) 3 x 3: 9 windows arranged in three rows of three windows each

f) 4 x 4: 16 windows arranged in four rows of four windows each

6. VMS will support the ability to preserve aspect ratio

7. VMS will support digital zoom on live or recorded video, without requiring a video pause

8. VMS will enable/disable video de-Interlacing

9. Image Toolkit software will include the following capabilities:

a) Add the date and time to the image

b) Add text annotation to the image

c) Copy the image to the clipboard so that it can be pasted into other applications

d) Print the image

e) Save the image to disk in various standard file formats

f) Adjust the brightness and/or contrast of the image

g) Convert a color image to grayscale

h) Apply filters to the image to smooth or sharpen

i) Apply edge detection to highlight borders and surfaces of objects within the image

10. VMS Review application shall allow users to select video to be exported and from a precise start time and end time

11. VMS shall provide a default digital certificate (MD5) for signing video clips that are exported

12. VMS will export an image in Windows Bitmap format

13. VMS will export an image in JPEG (Joint Photographic Experts Group) format at variable compression settings

14. VMS will enable a user to open live video windows

15. VMS will enable a user to view live video from multiple digital recorders and sites

16. VMS will enable users to request video from one camera or a group of cameras at a specified date and time and for a specified duration:

a) Include drag-and-drop from the camera tree for camera selection

b) Provide typical calendar control to ease selection of the year, month, and day

c) Provide time and duration specified by data entry or by dragging the mouse over a time range

d) Include video request defaults to the last five minutes of video from the selected camera or group

e) View live or historical alarm events and associated video

17. VMS shall support attachment of video to documents such as incident reports and ease retrieval of reports and associated video

18. VMS shall support processing of video requests

19. VMS shall support control of video playback including:

a) Buttons to start and stop playback from the current video position

b) Button to step forward or backward through the video in single time increments

c) Button to step forward or backward through the video in single frame increments

d) Button to step forward or backward through the video in multiple frame increments

e) Button for moving through video in reverse

f) Ability to cause video to loop continuously

g) Positioning controls: Slider bar and buttons to quickly and conveniently position to the beginning, end, or any other time, within the video clip

h) Speed control: Slider bar to control the rate of playback

20. VMS shall support scanning of recorded video for activity through an energy graph that indicates levels of activity

21. VMS shall authenticate video to enable users to verify that the video has not been modified since it was recorded

22. VMS shall have live video windows consistent with video playback windows in appearance and operation

23. VMS shall control PTZ cameras

24. VMS shall allow the entire live video window to be a mouse-sensitive area for PTZ control

25. VMS shall provide an optional “heads up display” (HUD) to overlay the video in order to provide a visual indication of the window areas that control zoom, focus, and iris functions

26. VMS shall support camera presets by providing a toolbar or other GUI method for working with camera presets when viewing live video from a PTZ camera

27. VMS shall provide the ability to view camera tours through a graphical, icon-based user interface

28. VMS shall allow the user to access a calendar view to query by month, day, and year, and by hour, minute, and second

29. VMS shall allow the user to access a hierarchical tree to manage icons that represent cameras

30. VMS shall allow the administrator to configure access rights and every workstation. It will be possible to restrict the operations that are available to a user in Review. It will restrict or enable the following functionality:

a) Live Video

b) PTZ Control

c) Camera Menu

d) Recorded Video

e) Export Video

f) Investigation Management

g) Alarm Notification

31. VMS shall allow the user to select the following patterns functionality:

a) Configure PTZ Presets

b) Call up Camera Patterns

c) Record Patterns

d) Stop Recording Pattern

32. VMS shall allow the user to access a third-party camera menu:

a) Allow a user to access the internal menu of a camera directly from Review

b) Menu will be available for any of the supported protocols

33. VMS shall allow the user to call up PTZ Presets

34. VMS shall allow the user to defines patterns can be run and recorded from Review

35. VMS shall support HD (1280x720) resolution

36. VMS shall support SXGA (1280x1024) resolution

37. VMS shall allow support MJPEG support in Review

38. VMS shall support language Localization Features including non European languages

39. VMS Recorder shall be capable of performing multiple tasks simultaneously, and within practical limits, no task will interfere with any other task. The VMS shall be able to perform the following tasks simultaneously

40. VMS recorder shall be able to perform the following tasks simultaneously:

a) Digitizing and compressing video and calculating digital signatures for video authentication

b) Writing video to files on local hard disks and maintaining an accurate index of the stored video files

c) Deleting older video files as needed, to free up space to record newer video files

d) Selectively transferring recorded video to long-term storage media

41. VMS shall be capable of supporting dual streaming

42. VMS shall be capable of performing the following tasks related to alarms:

a) Executing video image analysis algorithms, including activity detection and video loss detection

b) Receiving signals from alarm inputs and generating alarm messages

c) Processing alarm response instructions including calling, changing recording modes, and controlling alarm relay outputs

d) Forwarding alarms to a Review workstation, analog video monitor, or video wall that supports MPEG-4

43. VMS shall be capable of performing the following tasks and will support the following recording modes:

a) Continuous recording: In the simplest mode, the Digital Video Recorder units must record video 24 hours per day, 7 days per week, or as per user defined schedules

b) Event recording

c) Augment the Recording Quality based on an event

44. VMS shall be capable of scheduled recording, enabling system administrators to:

a) Establish a recording schedule based on hours of the day and days of the week

b) Specify the times during which each camera will be recorded, along with the recorder settings to be used during each period, including the frame rate, resolution, and quality settings

c) Define alarms or event responses, including instructions to trigger recording of specified cameras at specified frame rates and quality settings. Alarm response will include the following recoding capabilities:

vi. Start recording camera not currently being recorded.

vii. Supplement continuous scheduled or event recording by changing the recording mode or triggering recording of the same camera on a different recorder in a different video format. For example, the VMS may be configured to record cost-effective low frame rate video during non-alarm periods, and then start recording on high frame rate real-time recorders in response to alarm events.

viii. Selectively copy video to long-term storage to ESM (Enterprise Storage Manager). System administrators will be able to determine whether video will be retained on long-term storage media for each continuous or scheduled recording instruction.

ix. Automatically retain video on long-term storage media when video is recorded as part of a defined response to an alarm event.

x. Perform activity recording: the VMS will support an event recording mode designed for handling activity detection events during periods when frequent activity is expected but does not constitute an alarm event. Activity detection events will be handled internally by the Digital Video Recorders instead of triggering an alarm response. This mode preserves online video storage space by only retaining video in which activity has been detected.

45. The VMS shall be capable of supporting up to 200 cameras per recorder and up to 75 recorders, including the ability to:

a) Add, modify, and remove recorders from the system

b) Perform failover of recorders

c) Apply global recorder settings or edit existing individual recorder properties

d) Define recording modes: centralized and distributed

e) Associate cameras, recorders, and schedule assignments

46. The VMS shall support failover recording. Failover recorder will act as a hot standby, ready to take over the functions of a primary recorder. No action from the user will be required

47. VMS shall be able to configure alarm sources and responses in a schedule. The alarm source configuration and response will depend on the time of day and/or day of the week

48. Alarm response shall consist of various types of instructions to be executed by the VMS in response to an alarm message that can be generated by an alarm source

49. VMS shall support the following recording instructions: start recording or change the recording mode for one or more cameras connected to one or more Recorders

50. VMS shall support the following relay output instruction: control the state of one or more alarm relay outputs on Recorders or other system components such as edge devices or IP cameras

51. VMS shall support the following responses:

a) Call a Camera Preset

b) Run a Camera Pattern

c) Assign a camera to a monitor

d) Change output relay state

e) Send a message with Net Send

f) Send an e-mail

g) Trigger an alarm

52. VMS shall trigger contact closures on edge devices or IP cameras that are hardware equipped with this capability

53. VMS shall be able to display a text message to the users at the alarm monitoring station if they are using analog monitors

54. VMS shall be able to display/send an Alarm message to the Application Programming Interface for the Client SDK

55. VMS shall be capable of managing online storage. Storage will be intelligently managed so that the video that is most likely to be requested by users will be retained online

56. VMS shall be capable of immediate storage on local hard disks

57. VMS shall be capable of circular overwrites: Online storage on the Recorder units will be managed on a continuous circular overwrite basis

58. VMS shall be capable of event recording and selective online storage

59. VMS shall be capable of retaining non-event video online for a minimum amount of time, based on the Recorder hard disk space

60. VMS shall be capable of retaining video online after transfer to long-term storage (ESM); video will be retained online on the recorder to support immediate playback, even if the video has been successfully copied to long-term storage media

61. VMS shall allow disks to be reserved for video archiving

62. VMS shall support the copy of bookmarked video to the appropriate archive storage media and ensure that the video will not be overwritten or deleted for the specified number of days

63. VMS shall allow any video clip that is attached to a report to be archived automatically. The video retention time will be 60 days

64. VMS shall allow reports to include a data entry and reporting facility that enables users to enter data for reports, query the database to find reports, view reports, and export a HTML page with the ability to attach video clips and still images to a report

65. VMS shall provide a Health Check application for live monitoring and detailed system performance metrics on system components, including all server-side software applications, edge devices, and IP cameras

66. VMS shall be capable of exporting performance analysis results

67. VMS shall offer a user interface designed to enable the management of the following:

a) System logs

b) System alerts

c) Audit trail

d) Performance

e) Redirection to various outputs such as windows event log and e-mail

68. VMS shall be capable of leveraging Microsoft Operations Manager (MOM) integration and service packs that can cover all aspects of the operating system software, application software, IT functions, and hardware platforms

69. VMS shall support configurable notification of any alert to administrators via email, net-send, console message, or any other MOM support responses

70. VMS shall support integration into enterprise-wide IT management systems such as HP Open View and Tivoli Enterprise Server though MOM or windows events

71. VMS shall be capable of real-time performance analysis capture

72. VMS shall support the mapping functionality where digital maps are used to represent the physical location of cameras and other devices throughout the surveillance system

73. Maps shall have the ability to contain hyperlinks so as to create a hierarchy of interlinked maps

74. The mapping functionality shall be able to import maps from any graphical software supporting BMP, JPEG, or GIF image formats

75. Once a map is integrated, it can be viewed in the Review applications

76. VMS shall have flexible, open architecture built on accepted industry standards that facilitate integration with IT infrastructures

77. VMS shall have a distributed fault-tolerant, failover database architecture. The distributed server architecture allows for each subsystem to operate in an independent mode, without affecting video recording or live viewing

78. Database shall be redundant, using two separate servers, and will be initially and continuously synchronized with a master server database

79. VMS shall possess an internal watchdog to detect and recover from the unlikely occurrence of system lockup

80. VMS shall not use multiplexing or timed division technology for analog video recording. All analog camera sources will be digitally recorded

81. VMS software shall be part of the manufacturer’s standard software product offering and proven in reference installations

82. VMS shall be able to support video motion detection natively. This operation can be executed by the edge device or the IP Camera. Enabling motion detection will be performed either:

a) On a continuous basis

b) Scheduled for particular times, dates, days, months, etc

c) Defined areas of interest through an easy-to-use user interface using simple editing tools

d) At a defined level of sensitivity

83. VMS shall support software designed for the Microsoft® Windows® 2003 or Windows XP operating systems

84. VMS shall support both single and multi-site deployments

85. VMS will be designed to work with cameras that generate a standard NTSC or PAL composite video signal

86. VMS will support a variety of video matrix switcher devices, code generators, and PTZ cameras from different manufacturers

87. Recorders will use a standard Ethernet connection for video input via TCP/UDP/IP

88. VMS will be capable of supporting large organizations with systems at multiple site locations linked via LAN / WAN connections

89. VMS will support Verint intelligent edge devices and cameras

90. VMS will support all NTSC frame rates

91. VMS will support CIF, 2CIFH AND 4CIF video resolutions

92. VMS to include all required licensing for two (2) years

B. Video Management Information System shall manufactured by Verint or approved equal.

1. Recorder server shall be Nextiva 6.1 Dell Recorder SAS interface using PE R410 server, with Win2003, 2G RAM, PERC H800 card use with MD1200 storage device Verint P/N NEX-6.1-RE-DSASH800 or approved equal.

2. Master server shall be Nextiva 6.1 Dell using PE R410 server, 2G RAM, Xeon Processor Verint P/N NEX-6.1-MS-DELL or approved equal.

3. Storage shall be Dell PowerVault MD1200 direct attached storage with 12 drive bays 12 x 2.0 TB, 7.2k SAS drives, storage capacity 22.0 TB Verint P/N NEX-DPVEXT-22.0TB or approved equal.

4. Software maintenance shall be GOLD level for first year and include 9am-5pm EST technical support assistance and software bug fixes (no minimums apply) Verint P/N NEX-5-MAN-GOLD or approved equal. Provide additional one (1) year Gold software maintenance and include 9am-5pm EST technical support assistance and software bug fixes (no minimums apply) Verint P/N NEX-5-MAN-PWGOLD or approved equal.

2.08 SECURITY SYSTEM DEVICE CABLES

A. CCTV camera cabinet from device to IDF/MDF room shall be category 6 CMP rated UTP cable manufactured by Berk-Tek, Mohawk or approved equal.

2.09 DATA MODULAR INSERTS

A. Single modular inserts for data ports shall be 8 position 8 conductor, T-568B, Category 6 manufactured by Hubbell P/N HXJ6OR or approved equal

1. Data modular inserts shall be orange in color. Coordinate exact color with Owner Representative/Architect.

2.10 DATA HORIZONTAL CABLE

A. The horizontal unshielded twisted pair (UTP) cable utilized for the distribution of data, shall be 4-pair, 24 AWG, CMP rated, Category 6, manufactured by Mohawk P/N M58288 or approved equal.

B. The horizontal cable, running to/from each data port, shall be Orange in color.

C. Device locations that exceed 300 feet shall utilize Berk-Tek One Reach P/N 81000170, 81000174 and Fiber P/N BHCR02CAA04NFNM8NPXXX.

2.11 DATA PATCH PANELS

A. Patch panels for data cable termination shall be 24-port, high density modular to 110 patch panel(s), 8 position, 8 conductor, Category 6, manufactured by Hubbell P/N P6E24U or approved equal.

B. Data patch panels shall meet or exceed the current TIA/EIA 568-A and proposed ISO/IEC 11801-B defined 100 ohm copper cable channel specifications.

C. Data patch panel RJ-45 ports shall be factory numbered, 1 through 24 or 1 through 48.

D. Each panel shall contain a rear strain relief bar for horizontal station cable distribution manufactured by Hubbell or approved equal.

2.12 DATA PATCH CORDS

A. All data patch cords shall be Category 6, high-performance modular type, and shall include 8-position, RJ45 Style Modular plugs.

B. Data patch cords shall be constructed of 24AWG stranded copper wire and shall be laboratory testsed with a network analyzer to ensure category 6, performance requirements.

C. Data patch cords shall be manufactured by Hubbell P/N PCX6OR or approved equal.

2.13 FIBER OPTIC PATCH CORDS

A. Fiber optic patch cords in North High School shall be 3-5 meters in length, 50/125 multimode, SC/XX duplex, manufactured by Hubbell or approved equal. Switch end connector type shall match GBIC uplink module.

B. Fiber optic patch cords in South High School shall be 3-5 meters in length, 62.5/125 multimode, SC/XX duplex, manufactured by Hubbell or approved equal. Switch end connector type shall match GBIC uplink module.

2.14 UPS

A. Provide products meeting the requirements of the drawings and specifications from the following manufacturer:

B. APC P/N SUA1500RM2U, provide APC Rail Kit P/N AP9625 or approved equal.

2.15 CABLE SUPPORTS AND MANAGEMENT

A. Cable hangers shall be open-top cable supports (J-Supports), 2” diameter loop.

B. J-hook supports shall be installed in accordance with the manufacturer’s recommendations and located at intervals such that the cables do not rest on ceiling tile or grid at any point along the distance. Refer to Part 3 (Execution) of this specification for additional cable routing requirements.

C. Cable-ties shall be correctly sized to support the quantity and types of cables installed.

D. Beam clamps shall be steel with threaded bolt type closure. Spring steel or “quickclip” type clamps are prohibited.

E. Split mesh strain reliefs shall be properly sized for each cable that they support. Only one cable shall be installed in each split mesh strain relief.

PART 3 - EXECUTION

3.00 GENERAL

A. All devices shall comply with ANSI/TIA/EIA 568 – B.1, B.2, B.3 Commercial Building Telecommunications Cabling and NICET standards.

B. All telecommunication outlets shall be T568-B wiring configuration.

C. All UTP cabling shall meet or exceed all requirements in this specification, ICEA Publication 5-80-576 that are applicable to four pair inside wiring cable for plenum spaces within a building.

D. Coordinate all work with all contract documents including but not limited to:

1. Engineering floor plans and equipment layouts.

2. Electronic Security CCTV contract drawings.

3. Newton telecommunications/security facilities director/project manager.

E. Refer to drawings for pathways including sleeves, conduits, cable tray, and poke-through's, to be provided by this contractor.

F. Cooperate and coordinate with work of the Owner in executing work of this section.

G. Perform work so that progress of entire project including work with Owner is not interfered with or delayed. Obtain detailed installation information from all manufacturers of equipment provided.

H. Materials and Workmanship

1. Work shall be executed in workmanlike manner and shall be neat, plum, parallel to the building structure perpendicular to all electronics and associated cabling and neat in appearance when completed. All work shall adhere to the standards as set forth in this specification (See Section 1). Maintain maximum headroom at all times. Do not run work exposed unless shown exposed on drawings.

2. Material and equipment shall be new and installed according to manufacturer’s recommended best practices so that completed installation shall operate safely and efficiently, and be neatly installed.

I. This contractor owns the greater quantity and better quality where conflicts exist.

J. Continuity of Services: Do not interrupt existing services. Existing services shall remain operational at all times. If the existing services need to be disrupted for any reason the contractor shall contact the Owner (representative to be announced at a later date) and schedule the aforementioned shutdown. The contractor shall schedule the shutdown with the Owner 48 hours in advance.

K. Any reference to security system outlet/outlet shall indicate faceplate, modular insert, termination, cabling, labeling, etc.

L. All cabling shall be terminated at both ends unless noted otherwise.

M. The requirements of Part One and Part Two of the Specifications also apply to the execution of the work.

N. Verify the exact location prior to bid of all items that may be indicated and determine exact location of all security/electrical related items that are not indicated on the Drawings.

O. Include the cost of all work including sub-letting of any work that may be required to complete the work indicated in order to avoid work stoppages and jurisdictional disputes. The work to be sublet shall conform with precedent agreements and decisions of record. Jurisdictional assignment shall be a responsibility under this Section's contractual obligation.

P. Do not install equipment and materials which have not been reviewed by the Engineer. Equipment and materials which are installed without the Engineer's review or without complying to comments issued with the review shall be removed from the project when so instructed by the Engineer. No payment will be made for unapproved or removal if it is ordered removed. The Installer shall be responsible for any ancillary costs incurred because of its removal and the installation of the correct equipment and materials.

Q. Obtain detailed information on installation requirements from the manufacturers of all equipment to be furnished, installed or provided. At the start of construction, check all Contract Documents including all Drawings and all Sections of the specifications for equipment requiring electrical connections and service and verify electrical characteristics of equipment prior to roughing.

R. Any and all material installed or work performed in violation of above requirements shall be re-adjusted and corrected by the Installer without charge.

S. Refer to all Drawings associated with the project, prior to the installation or roughing-in of the outlets, conduit and equipment, to determine the exact location of all outlets.

T. After installation, equipment shall be protected to prevent damage during the construction period. Openings in conduits and boxes shall be closed to prevent the entrance of foreign materials.

U. All connections to equipment shall be made as required, and in accordance with the approved submittal and setting drawings.

V. Delivery, Storage and Handling:

1. Deliver, store, protect and handle products in accordance with recommended practices listed in Manufacturer's Installation and Maintenance Manuals.

2. Deliver equipment in individual shipping splits for ease of handling, mount on shipping skids and wrap for protection.

3. Inspect and report concealed damage to carrier within specified time.

4. Store in a clean, dry space. Maintain factory protection or cover with heavy canvas or plastic to keep out dirt, water, construction debris, and traffic. Heat enclosures to prevent condensation. Meet the requirements and recommendations of NFPA 70B and the Manufacturer. Location shall be protected to prevent moisture from entering enclosures and material.

5. Handle in accordance with NEMA and the Manufacturer's recommendations and instructions to avoid damaging equipment, installed devices and finish.

6. The equipment shall be kept upright at all times. When equipment has to be tilted for ease of passage through restricted areas during transportation, the Manufacturer shall be required to brace the equipment suitably to insure that the tilting does not impair the functional integrity of the equipment.

W. Site Observation:

1. Site observation visits will be performed randomly during the project by the Engineer. Reports will be generated noting observations. Deficiencies noted on the site visit reports shall be corrected. All work shall comply with the Contract Documents, applicable Codes, regulations and local Authorities whether or not a particular deficiency has been noted in a site visit report.

2. Be responsible to notify the Engineerten working days prior to closing in work behind walls, raised access floors, ceilings, etc., so that installed work can be observed prior to being concealed.

3. Work concealed prior to observation and correction of deficiencies shall be made accessible for review at the discretion of the Engineer. Bear all costs for allowing worked to be reviewed.

4. Areas shall stay accessible until deficiencies are corrected and accepted. Notify the Engineer when all deficiencies are corrected. Return reports with items indicated as corrected prior to re-observation by the Engineer.

X. Project Open House:

1. If the Owner elects to have an open house at the end of the project, provide assistance to the Owner. Cooperate and provide manpower to operate and demonstrate systems during the open house as requested by the Owner.

Y. Change Orders, Modifications, Revisions and Directives:

1. When change orders, modifications, revisions or Engineer's Directives are issued or authorized, provide the required additional material, equipment, personnel and workers to prevent delays in the work, and to complete the work within the time limit of the Contract unless a specific time extension is requested with the change and accepted. Include costs for expediting deliveries where required.

2. Requests for additional compensation shall be submitted broken down and associated by item, tasks and Drawing or sketch number with material and labor costs, so quantities can be easily verified.

3. Requests shall be properly and adequately identified so the scope of work can be clearly determined. Indicate who originated change in work.

4. Submit on all credits broken down as requested for adds. Credits shall be separately identified and accounted for. Do not indicate as net changes with adds.

5. Unit costs for labor and material shall be equal for adds, deletes and credits.

Z. Loose materials shall not be stored on-site. A "gang box" is acceptable to be placed in a location agreeable to the Owner and the Contractor. The Installer is responsible for all equipment and materials and for their delivery until the system is deemed complete and accepted by the Owner.

AA. Under no circumstances shall the Owner's waste containers, compactor or dumpster be used for any kind of waste material.

BB. A trailer may be used for the storage of materials to be located on the Owner's property at a location designated by the Owner. Such on-site storage shall be kept locked by the Installer. Security for the trailer and its contents shall be strictly the responsibility of the Installer.

CC. Protect existing in spaces where work is being performed to protect it from damage and from the accumulation of dirt.

DD. Any ceilings, walls, floors, furniture, equipment, furnishings, etc., damaged by the work of this Section shall be replaced, or at the Owner's option, repaired with similar materials, workmanship and quality.

EE. Work includes field survey of existing conditions, systems, equipment and tracing of existing circuits in order to determine scope of work.

FF. Maintain the existing building in operation at all times during the entire construction period. If it is necessary to have a system shutdown, a written request for approval shall be submitted in advance stating the estimated shutdown time. Work shall be planned to minimize shutdown. Shutdowns shall be at the convenience of the Owner and, if necessary, on premium time.

GG. Clean and touch up all equipment, materials and work sites at the completion of work in each area.

HH. Certain portions of the work area may be occupied during construction. Determine which areas and schedule work accordingly and include necessary premium time.

3.01 MAKE SURE NECESSARY PROVISIONS TO PROVIDE CONTINUOUS SERVICE OF ALL EXISTING SYSTEMS THROUGHOUT ALL OCCUPIED AREAS

A. Coordinate with engineer for color of all faceplates.

B. Coordinate with the electrical contractor for mounting compatibility.

C. Provide all blank inserts, for entire project.

D. Refer to the security contract drawings for the exact quantity and location of the security device outlets.

3.02 ELECTRONIC SECURITY SYSTEM

A. GENERAL

1. The security system contractor shall be responsible for providing any additional or associated cables/wiring required by the manufacturer of the system(s) provided.

2. This contractor shall be responsible for any and all additional wiring infrastructure needed to make the system functional as a result of an approved “or equal” system to the system specified.

3. This contractor shall coordinate with the client’s IT department if connections to their network is required.

B. Coordinate locations of all monitors, control and recording equipment with owner’s representative.

C. Impedance and Level Matching:

1. Carefully match input and output impedances and signal levels at signal interfaces. Provide matching networks where required.

D. Control Circuit Wiring:

1. Install control circuits in accordance with NFPA 70 and as indicated. Provide number of conductors as recommended by system manufacturer to provide control functions indicated or specified.

2. All housings are to be located as specified and shown on drawings.

3. Make installation in strict accordance with approved manufacturer's drawings and instructions.

4. The Installer shall provide necessary transient protection on the AC power feed, all station lines leaving or entering the building, and all central office trunks. All protection shall be as recommended by the equipment supplier and referenced to earth ground.

E. The new CCTV System shall be integrated with the existing Lennel access control system active directory forest. Provide CCTV recording capabilities for individual camera record functions based on if – then response from valid door activation or forced entry.

F. New Ethernet switch and IP camera network shall match existing school information systems IP scheme of data network.

3.03 SECURITY SYSTEM HORIZONTAL CABLE

A. Provide all security system device cables for for this project.

B. All cables shall be terminated at both ends.

One end of each IP network data horizontal cable shall be terminated in an eight position, eight conductor, Category 6 modular insert(s) at the outlet. One end of each data horizontal cable shall be terminated in a modular patch panel at the telecommunication IDF room.

C. Install wire and cable in approved/provided raceways as specified and as approved by the authorities that have jurisdiction.

D. Cable Pulling: Pulling Tension: Maximum pulling tensions for 4 pair horizontal UTP cable shall not exceed 11ON (25lbf).

E. Maintain cable twist to within ½" of the main point of mechanical termination (IDC) for all IP network cable terminations.

F. When stripping cable for termination, remove only a minimum amount (i.e., as little as possible) of cable jacket insulation.

G. Additional cable slack (service loop) shall be provided for maintenance or future cabling system changes:

1. Outlet = 10 feet

2. Equipment Racks = 10 feet

H. Splices are not permitted for any horizontal cabling.

I. No horizontal IP network data cable run shall exceed 295 feet (90m) (including slack).

J. Plenum rate cable (CMP) is required in all areas within an air return plenum or where nationa, state and/or local jurisdiction require the use of plenum rated cable. The contractor is responsible for verifying the use of plenum rated cable as it applies to local jurisdiction.

3.04 DATA PATCH PANELS

A. Provide the sufficient quantity of data patch panels to terminate all horizontal IP network data cables distributing from each security or telecommunications room (MDF, IDF) on each floor. Refer to telecommunications contract drawings for quantities and details.

B. Provide additional 20% spare capacity of ports at each closet for future growth.

3.05 DATA PATCH CORDS

A. Furnish all data patch cords listed.

B. 50% - Three foot Category 6, 50% - Five foot Category 6 for 100% of the quantity of terminated 4-pair data cables at the Patch Panel end.

3.06 FIBER OPTIC PATCH CORDS

A. Provide all fiber optic patch cords.

B. Furnish all data patch cords listed.

C. 3-5 meter SC-XX, 50/125 micron, multimode, duplex optical fiber patch cord at each IDF/MDF room in the North School.

D. 3 meter SC-XX, 62.5/125 micron, multipmode, duplex optical fiber patch cord at each IDF/MDF room in the South School.

3.07 BONDING AND GROUNDING

A. Provide a suitable security systems ground for equipment as required per ANSI/TIA/EIA-607 (telecommunications grounding), IEEE Emerald Green book and NEC requirements.

B. All security enclosures, lightning protection devices, equipment racks and/or cabinets associated with the security system shall be bonded together with #6 AWG, and then bonded/grounded with #6 AWG to the telecommunications grounding busbar (TGB).

3.08 CABLE SUPPORTS AND MANAGEMENT

A. All pathways shall be parallel to building lines and shall sweep/turn at 90 degree angles maintaining minimum bend radius for cable and will comply with the guidelines and recommendations outlined in ANSI/TIA/EIA-568 B.1, B.2, B.3 and ANSI/TIA/EIA-569-A.

B. Provide cable and supports as required. All cables shall be supported.

C. Where cable tray, ladder rack and conduit are not provided for support of the security system cables, provide cable support at 4 to 5 foot intervals. J-hooks should also be placed at every cable tray intersection, at every gap in cable tray, at every cable drop point such as conduit stub-up, without exception, and wherever support is needed to avoid sagging or to avoid touching piping, ducting or other trades work. Use of the ceiling wire grid installed by others is not permitted. Security Systems contractor must provide separate hangers for securing J-hooks and their installation and should be coordinated with general contractor.

D. Cable supports shall be mounted independently from the building structure. Cables shall not be supported from the ceiling structure, mechanical, electrical, fire protection or plumbing devices.

E. Where metal conduit is provided by others for use by the installer, provide each end of the conduit with plastic grommets for cable sheath protection.

F. Provide all strain relief for purpose of maintaining bend radius and providing additional protection/support of exposed cables.

G. Cable Infrastructure

1. Provide cable management and support as required.

3.09 FIRESTOPPING

A. All conduits, sleeves, and cable tray point of entry shall be properly firestopped, per local, state, and federal codes with reusable firestopping materials.

3.10 LABELING AND IDENTIFICATION

A. All equipment and cabling shall be properly identified by means of clear and concise labels. All identification shall meet or exceed the minimum requirements of EIA/TIA 568, B.1, B.2, B.3, 606 and BICSI standards.

B. All labels must be permanent and shall be clearly printed on clear or opaque tape and meet the following requirements:

1. The font shall be approximately 1/8” in height, block characters and clearly legible.

2. The text and color shall contrast with the label background (e.g., black on white).

3. Hand written labels are not acceptable.

4. All labeling material shall meet the minimum flame rating requirements.

5. Embossed type labels are not acceptable.

6. Label patch panels and cross connect blocks numerically, top-to-bottom.

7. Label all cable segments within all security panels.

C. Provide labeling as specified below, and as specified by Newton telecommunications security facilities director/ project manager.

1. Labels shall be constructed of approved material in order to meet the legibility, defacement, adhesion (adhesive labels only), and exposure requirements of UL 969. All labels shall be mounted horizontally in order to be read from left to right.

a. Adhesive Labels shall be constructed of color-coded paper with a clear polyester over laminate, Brady USA, Inc. PermaShield, RayChem TMS or approved equal. Adhesive material used shall be approved for material being attached to, typeface shall be medium density, Helvetica, 1/8 inch (3mm) high black characters unless indicated otherwise.

b. Heat-Shrink Labels shall be constructed of color-coded flame retardant, heat shrinkable polyolefin, Brady USA, Inc, RayChem TMS or approved equal. Typeface shall be medium density, Helvetica 1/8 inch (3mm) high black characters unless indicated otherwise.

c. Handwritten or embossed labels are not allowed.

D. All cables shall be clearly labeled at both ends.

3.11 DOCUMENTATION

A. Label all equipment as specified above

B. Provide the Owner with:

1. Hard copy documentation of "As-Built" Security System Wiring diagrams, riser diarams and Administration Test Reports.

2. Hard copy documentation of test results for every cable segment and link in 3-ring binder. Documents shall include measured values as well as whether or not the test passed.

3. "As-Built" drawings indicating location of all equipment including but not limited to devices, junction boxes, control panels, power supplies, head end equipment, and each segment and cable routing. Indicate labeling for each piece of equipment.

4. Refer to Part One for additional documentation.

3.12 SYSTEM PROGRAMMING

A. The system shall be programmed by the contractor to provide a fully functional integrated system.

B. Provide system programming assistance to client for CCTV control permissions. Create and provide an access level matrix that links employees and permission levels in accordance with associated time schedules from the existing level system to the CCTV VMS system.

C. Programming shall include, but not be limited to, defining hardware, doors, monitor points, clearance codes, time codes, door groups, alarm groups, operating sequences, camera call ups, etc. Input of all program data shall be by this contractor.

D. This contractor shall develop and input system graphics, such as, maps and standby screens. Owner shall provide floor plan drawings as the basis for creation of maps. Development of maps shall include the creation of icons for all cameras, doors, monitor points, and tamper circuits.

3.13 TESTING

A. The security system contractor shall be responsible for all final system hardware hook-up and checkout prior to final testing the system with the end user. The contractor shall provide all final connections to all components that require testing and commissioning of the system.

B. The physical CCTV security system shall be conducted in five phases consisting of the following:

1. Proof of Concept test; Demonstrate that all components and features that will be provided by the security system vendor will meet or exceed the design and will function satisfactorily for this specific security application.

2. Factory Acceptance test; Demonstrate that the major features of the systems function properly when connected together in the actual quantities required.

3. Site Acceptance test; Provide equipment inspection and demonstrate each device operates properly both individually and globally with the entire system.

4. Operational Acceptance test; Demonstrate over a 30-day continuous period of time after Site Acceptance test, that the system is reliable and functions under continuous operation by the trained end user.

5. Ongoing System test; Provide quarterly test of system to demonstrate features and components are functioning and reporting properly.

C. All cables (UTP) shall be tested as noted below.

D. Provide a hard copy of all test results. Handwritten test results will not be accepted.

E. All testing shall be completed after all security components have been secured in their final position and are properly labeled per this specification.

F. Building must be operational (i.e.; building lighting and power must be energized).

G. Provide Newton with individual binders documenting the Security System Administration Test Reports. Each binder shall have the test technician's name printed and signed with date of test. Testing and documentation shall include but not limited to:

1. Category 6 UTP Cable Testing and Documentation

a. Perform a complete Category 6 link level III test in accordance with TSB-95 level III component and cable test standards on all horizontal cable and component installations. Provide owner with test results and documentation for cabling system infrastructures. Test shall include, but not be limited to:

b. Provide owner with test results and documentation for data network cabling system infrastructures. Test shall include, but not be limited to:

1) Wire map

2) Length

3) Attenuation

4) PASS/FAIL Attenuation tested per ANSI/TIA/EIA 568-B standards.

5) NEXT/FEXT (Near End Cross Talk/Far End Cross Talk)

6) PASS/FAIL NEXT/FEXT tested per ANSI/TIA/EIA 568-B standards.

7) Attenuation to Cross Talk Ratio (ACR)

8) PASS/FAIL ACR tested per ANSI/TIA/EIA 568-B standards.

9) Link Attenuation per ANSI/TIA/EIA 568-B standards.

10) Link per ANSI/TIA/EIA 568-B standards.

c. Device TestProvide walk tests and set-up procedures for each camera as specified by the manufacturer to ensure that all boundaries of coverage are sufficient to detect intruders in each secured area.Provide walk test for each camera, door entry and egress operation, CCTV camera operation to ensure that each component of the entire system is functional and reporting the proper programmed response. Ensure that the event log has recorded the correct response in accordance with the sequence of operation.

d. Provide final walk test for complete system with design engineer and end user for final system acceptance.

3.14 SLEEVING AND PENETRATIONS

A. Raceways and openings shall be laid out in advance to permit their provision in the work. Sleeves and raceway shall be set before masonry is constructed. Any extra work required where sleeves or raceways have been omitted or improperly placed shall be performed at the expense of the Installer, which made the error or omission, including coring.

B. Provide sleeves for raceways and cable trays penetrating all types of floors, fire walls, or smoke partitions. Install approved material to provide for fire stop.

C. Provide waterproof seals inside and outside raceway when penetrating from the exterior or underground.

D. Provide acoustic sealer in sleeves between occupied spaces.

E. Sleeves installed in floors shall extend two inches (50mm) above the finished floor unless specifically indicated otherwise.

F. Provide sleeves in masonry construction and in full height (slab to slab) walls.

G. Provide sleeves for all openings.

H. Penetrations through fire rated construction shall comply with a listed fire rated assembly as detailed in the UL Fire Resistance. Pipe sleeves through floors, exterior walls and fire-rated construction shall be galvanized Schedule 40 steel pipe. Pipe sleeves through non-fire-rated partitions shall be 26-gauge galvanized steel.

1. Sleeves Through Foundation Walls: Provide galvanized schedule 40 steel with continuous weld slip on welding flange water stop. Provide waterproof resilient link caulking assembly by Link-Seal or Sure-Seal.

2. In areas where conduit or cable tray is exposed, install sleeves flush with the finish floor, except in mechanical rooms, and janitor's closets extend sleeves at least 4 inches above finish floor.

3. Annular Space Requirements: Sleeves shall be sized to provide a total clearance of 1/2 inch around pipe or duct including insulation cover. Annular space around fire rated through penetrations assemblies shall be in compliance with the Listed Assembly.

4. Packing between the conduit and sleeve in fire rated construction shall be a combination of listed insulation and fire-proof caulk

I. Through Penetration Assemblies: The combination of materials shall have the same fire rating, in hours, as the wall or floor, as tested in accordance with the code referenced editions of ANSI/UL 1479 (ASTM E-814). The combination of materials shall be classified by UL for the fire rating required and shall be listed as a numbered system in the UL Fire Resistance Directory.

1. Caulking of conduit and cable tray penetrations through floor slabs, smoke barriers and fire rated partitions shall be performed under the Division 7 Section for Firestops and Smokeseals.

J. Provide adjustable escutcheons on exposed conduit that passes through finished floors, walls, and ceilings. Escutcheons shall be chromium-plated cast brass, sized to cover sleeve opening and to accommodate pipe and insulation.

3.15 SEISMIC SUPPORTS, SUPPLEMENTARY STEEL AND CHANNELS

A. Provide all supports, supplementary steel and channels required for the proper Seismic installation, mounting and support of all work installed under this Section.

B. All supports, supplementary steel and channels shall be furnished, installed and secured with all fittings, support rods and appurtenances required for a complete support or mounting system.

C. Supplementary steel and channels shall be firmly connected to the building construction in a manner approved by the Engineer prior to the installation of same.

D. The type and size of the supporting channels and supplementary steel shall be of sufficient strength and size for seismic restraint and to allow only a minimum deflection in conformance with the channel and supplementary steel manufacturer's requirements for loading.

E. All supplementary steel and channels shall be installed in a neat and workmanlike manner parallel to the walls, floor and ceiling construction. All turns shall be made with 90 degrees and 45 degrees fittings, as required to suit the construction and installation conditions.

F. All supplementary steel, channels, supports, and fittings, shall be Underwriters' Laboratories, Incorporated, approved, be galvanized steel and be manufactured by Steel City, Unistrut, Power-Strut, T. J. Cope or approved equal.

G. Provide supports to meet the required Seismic rating as indicated under "Part One" of this Specification.

H. Provide beam clamps with set screws (C-clamp type).

I. Work under this Section shall be held in place by Seismic rated methods.

J. Supporting from the roof decking will not be acceptable.

K. Provide expansion anchors on masonry units or brick work. Power actuated supports will not be accepted.

L. Provide stainless steel or corrosion resistant supports in corrosive areas on wet or damp areas.

M. Support work from the building structure, independent of suspended ceilings, roof deck or other trades work. Where ductwork, pipes, pipe racks, type of building construction materials or structural framing members provide obstruction or difficult support means, hanger rods shall be used in association with horizontal sections of steel support channels, in an approved manner.

N. All work shall be installed in a rigid and satisfactory manner and shall be supported by bar hangers in frame construction or shall be fastened directly with wood screws on wood, bolts with expansion shields on concrete or brick toggle bolts on hollow masonry units, and machine screws or welded threaded studs on metal. Threaded studs of the proper type and holding capacity driven in by a power charge and provided with lock washers and nuts are acceptable for mounting of equipment on solid concrete walls or slabs.

O. Do not use power charge driven supports for any work that is to be hung from a horizontal surface without written permission from the Owner.

P. Preset inserts of the proper type and holding capacity shall be used in overhead slab construction wherever possible.

Q. Provide lateral supports for work to prevent excessive movement during a seismic event using rods, braces or galvanized or stainless steel cables.

R. Pendants, supports or hanging rods longer than 12 inches (300mm) shall be laterally braced.

S. Where installed in damp, wet and areas requiring wash down, all surface mounted panels, boxes, junction boxes, conduit, etc., shall be supported by spacers to provide a clearance between wall and equipment.

3.16 CABLE PROTECTION

A. Cables to be installed in existing enclosed open bays or furred spaces where conduit stubs are not provided, shall be protected from chafing or any damage. The Installer shall verify that the warranty shall not be violated before installing any cabling in these locations.

B. Provide bushings in all metal studs and other openings where cables will pass through. Bushings shall be of two (2) piece construction with one piece inserted through the openings and the second piece locking it into place. Single piece bushings with locking tabs or friction fit are specifically prohibited.

C. Provide cutting, coring, sleeves and bushings and seal as required at all penetrations.

D. Cables damaged during installation shall not be repaired. They shall be completely replaced with new cable at no additional cost.

3.17 SYSTEM ACCEPTANCE

A. Obtain written acceptance from the Owner or their authorized representative for each cabling system installed on this project. Failure to obtain written acceptance shall result in delay of start of warranty period. No claim for additional costs will be allowed due to not receiving written acceptance. Warranty period will start upon receipt of written acceptance.

B. The Security System provider shall customize a training program to be implemented at the customer site.

C. A dedicated certified trainer employed full time for the purpose by the manufacturer of the access control/CCTV system shall conduct system training provide 2 days of training at each school in the base bid. Provide an alternate daily rate for additional owner requested training above and beyond the base bid requirements. Provide all necessary training manuals and supporting documentation to support the features and system specified.

D. The vendor shall train the administration on the use of the programming all CCTV capabilities of the system.

3.18 ACCEPTANCE DEMONSTRATIONS

A. Systems installed under this section shall be demonstrated to the Owner and Engineer. Demonstrations are in addition to necessary testing and training sessions. Notify all parties at least 7 days prior to the scheduled demonstration. Schedule demonstrations in cooperation with and at times convenient to all parties and so as to not disturb ongoing activities.

B. Systems shall be tested prior to the demonstrations and each system shall be fully operational and tested prior to arranging the Acceptance Demonstration. Final payments will be withheld until a satisfactory demonstration is provided for all systems indicated or requested.

C. If the demonstration is not totally complete, performing all functions, features and connections or interfaces with other systems, or if there is a failure during the demonstration, additional demonstrations shall be arranged. Provide and pay for all costs, labor and expenses incurred for all attendees for each additional demonstration required for acceptance and demonstration of complete system operation.

D. Demonstrations shall be scheduled in ample time to complete all activities prior to final acceptance and Owner occupancy. Demonstrations shall take place at least 30 days prior to the scheduled project completion date and 30 days prior to owner's use and occupancy.

E. As a minimum, provide demonstrations for systems indicated under "Work Included" under Part One of the Specifications. Provide demonstrations of additional systems as requested by the Owner or Engineer.

3.19 PROJECT OWNER COORDINATION

A. Prior to Substantial Completion of the project and in ample time to address and resolve any coordination issues, request and arrange meetings between the Owner, Owner's Vendors and Consultants, Engineer to discuss the Scope of Work for each system being provided and the interface required for a fully functional and operational system upon project completion. Initial meetings shall be scheduled three months prior to the scheduled Substantial Completion date or as soon as Submittals are submitted and reviewed for projects with shorter schedules.

B. At these meetings the required interface with the Owner shall be reviewed, requests for information required to complete programming or for coordination shall be presented and system operation and philosophy shall be discussed.

C. Additional meetings shall be held as requested by any party so that all issues are resolved and with the goal and intent being that all systems are fully operational and functional upon project Substantial Completion and that the responsibility for all components required is clearly established.

3.20 CLEANING UP

A. Upon completion of all work and testing, thoroughly inspect all exposed portions of installation and completely remove all exposed labels, markings, and foreign material.

B. The interior of all equipment and cabinets shall be left clean; exposed surfaces shall be cleaned and plated surfaces polished.

C. Repair damage to finish surfaces resulting from work under this section.

D. Remove material and equipment from areas of work and storage areas.

E. All equipment shall be clean from dirt, dust, and fingerprints prior to final acceptance.

F. Touch up all damaged pre-finished equipment using materials and methods recommended by the Manufacturer.

3.21 PROJECT CLOSEOUT

A. Provide closeout submittals as required herein and in Division One including the following closeout submittals.

1. Operation and Maintenance Manuals

   a. Record Drawings.

   b. Test Reports

   c. Security System Administration Test Reports.

   d. Manufacturer Warranty

B. Obtain written receipts of acceptance closeout submittals submitted. Receipts shall specifically detail what is being delivered (description, quantity and specification section) and shall be dated and signed by firm delivering materials and by the Owner's Representative.

END OF SECTION

44 Pages of Drawings
Must be obtained through the Purchasing Dept.
(Call or email ahead to ensure availability (619) 796-1220 or Purchasing@newtonma.gov)