

Ward Park Improvements

ADDENDUM NO. 1

August 20, 2014

ISSUED BY: Office of the City Engineer
Department of Public Works
Administrative Offices – 2nd Floor
135 Neil Street
Marlborough, MA 01752

Addendum No. 1 is considered part of the Contract Documents and modifies the original Bid Documents dated August 2014. The prospective bidder shall acknowledge receipt of this Addendum in the appropriate space provided on the Bid Form in Section 00300. Failure to acknowledge this Addendum will result in disqualification of the bidder.

BID DATE

The Bid Date for this project has been changed **FROM** August 27, 2014, 9:00 AM **TO September 4, 2014, 9:00 AM** at the Office of the City Engineer, Department of Public Works, Administrative Offices – 2nd Floor, 135 Neil Street, Marlborough, MA 01752.

Questions regarding clarifications of the Contract Documents will be received in writing until **Wednesday, August 27, 2014, 11:00 AM.**

CHANGES TO THE SPECIFICATIONS

The Division 1 Specifications were inadvertently omitted from the PDF version posted.

INSERT DIVISION 1 GENERAL REQUIREMENTS as attached.

DIVISION 1

GENERAL REQUIREMENTS

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 LOCATION OF WORK

- A. The work of this contract is located in the City of Marlborough, Massachusetts at Ward Park, 32 New Street. Work is to occur as shown on the Drawings and described in the specifications, within the indicated limit of work line.

1.02 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required to install the site improvements complete as shown on the Drawings and as specified herein.
- B. The Work includes, but is not necessarily limited to, the following:
 - 1. All work required to construct the park improvements including but not limited to: all work required for site preparation and removals including removals and disposals or hammer milling of existing bituminous concrete pavements, concrete foundations and stone retaining walls, chain link fences, and other miscellaneous items; clearing and grubbing; furnishing and installing and maintenance of erosion controls; rough and fine grading of all areas identified within the limit of work including loaming and seeding; installation of sub drainage and preparation of a natural turf athletic field; preparation of the base and furnishing and installing new bituminous concrete pavements; new site drainage; curbing and pavement markings; furnishing and installing new chain link fencing and gates; installation of a new basketball court; installation of a new tennis court; installation of a new volleyball court; installation of a new skateboard court; furnishing and installing new play area; furnishing and installing new picnic tables, and, waste containers; furnishing and installing a new pre-manufactured concrete rest room facility with all utility connections and foundation; furnishing and installing all conduits, wire and infrastructure including the electrical service for all new proposed site and field lighting; landscaping; furnishing and installing all other miscellaneous work to provide all improvements as described in the contract documents.
 - 2. Per the Bid Form, those items listed shall be priced separately under Add Alternate pricing.
- C. Refer to Article 7 of the General Conditions for additional requirements.

1.03 CONTRACTOR'S USE OF PREMISES

- A. Contractor shall have complete and exclusive use of the premises for the performance of each portion of the Work during active construction of work within the sit, except as noted under Section 01170. Upon completion of the Work element Owner shall be allowed access for their use. Contractor shall provide construction fencing, as necessary to separate public use areas from work areas of construction occupied by the Contractor. Utility companies shall also have complete and exclusive use of their easements during construction.

- B. Contractor shall assume full responsibility for safety and security of all his/her and his/her subcontractors materials and equipment stored on the site.
- C. Open excavations will not be permitted. Contractor shall be responsible for securing excavations with temporary chain link security fencing.
- D. If directed by the Owner, move any stored items that interfere with operations of Owner.
- E. Obtain and pay for use of additional storage or work areas if needed to perform the Work.

END OF SECTION

SECTION 01046

CONTROL OF WORK

PART 1 GENERAL

1.01 CONSTRUCTION MATERIAL AND EQUIPMENT

- A. Furnish construction material and equipment which will be efficient, appropriate and large enough to secure a satisfactory quality of work and a rate of progress which will ensure the completion of the work within the Contract Time. If at any time such construction material or equipment appears to be inefficient, inappropriate or insufficient for securing the quality of work required or for producing the rate of progress aforesaid, Engineer may order the Contractor to increase the efficiency, change the character or increase the material or equipment and the Contractor shall conform to such order. Failure of the Engineer to give such order shall in no way relieve the Contractor of his obligations to secure the quality of the work and rate of progress required.

1.02 PRIVATE LAND

- A. Do not enter or occupy land outside limits of work or private land outside of easements, except by permission of the land owner.

1.03 STRUCTURES AND PAVEMENT LOCATIONS

- A. Locate structures and pavement substantially as indicated on the Drawings. The Engineer/Owner reserves the right to make such modifications in locations as may be found desirable to avoid interference with existing structures or for other reasons. Any conflicts noted by Contractor shall be brought to the attention of the Engineer immediately.

1.04 USE OF SITE

- A. All truck routes and trucking times will be reviewed and approved by the Owner.
- B. At preconstruction conference, contractor shall provide anticipated construction schedule and Owner shall review and provide any dates of construction restrictions associated with contractor's construction schedule.

1.05 OPEN EXCAVATIONS

- A. Adequately safeguard all open excavations by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons and damage to property. Provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen. Remove bridges provided for access during construction when no longer required. The length or size of excavation will be controlled by the particular surrounding conditions, but shall always be confined to the limits prescribed by the Engineer. If the excavation becomes a hazard, the Engineer may require special construction procedures such as limiting the size of the excavation and requiring that the excavation shall not remain open overnight.

- B. Take specific precautions to protect the general public and prevent unauthorized access to unattended excavations. Accordingly, unattended excavations must be covered, barricaded or backfilled. Covers shall be steel road plates at least 3/4 –in thick or equivalent; barricades shall be fences at least 6-ft high with no openings greater than 4-in between vertical supports; backfilling shall be sufficient to eliminate the excavation. Alternatively, Contractors may choose to attend excavations at all times, for instances by hiring a police detail, security guard or other attendant who shall be present during times when the excavation will be unattended by the Contractor.

1.06 TEST PITS

- A. Excavate test pits, at the direction of the Engineer, to locate underground pipelines or structures in advance of the construction. Backfill test pits immediately after their purpose has been satisfied and restore and maintain the surface in a manner satisfactory to the Engineer.

1.07 CARE AND PROTECTION OF PROPERTY

- A. Be responsible for the preservation of all public and private property and use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, restore such property to a condition similar or equal to that existing before the damage was done, or make good the damage in other manner acceptable to the Engineer.

1.08 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES

- A. Assume full responsibility for the protection of all buildings, structures, and utilities, public or private, including poles, signs, services to buildings, utilities in the street, gas pipes, water pipes, hydrants, sewers, drains, existing asbestos concrete pipe underdrains, and electric and telephone cables, whether or not they are shown on the Drawings. Carefully support and protect all such structures and utilities from damage of any kind. Immediately repair any damage resulting from the construction operations.
- B. Assistance will be given the Contractor in determining the location of existing services. The Contractor, however, shall bear full responsibility for obtaining all locations of underground structures and utilities (including existing water services, drain lines, underdrains and sewers). Services to buildings shall be maintained and all costs or charges resulting from damage thereto shall be paid by the Contractor.
- C. Notify all utility companies in writing at least 72 hours (excluding Saturdays, Sundays and Legal holidays) before excavating. Also notify Massachusetts Dig Safe, telephone “811” at least 72 hours prior to start of work.

1.09 WATER FOR CONSTRUCTION PURPOSES

- A. In locations where public water supply is available, the Contractor may be allowed to use water without charge for construction purposes. Advanced notice of 48 hours to the DPW by the Contractor is required.
- B. The express approval of the Owner shall be obtained before water is used. Waste of water shall be sufficient cause for withdrawing the privilege of unrestricted use. Hydrants shall only be operated under the supervision of the Owner's personnel.

1.10 COOPERATION WITHIN THIS CONTRACT

- A. All firms or persons authorized to perform any work under this Contract shall cooperate with Contractor and subcontractors or trades and assist in incorporating the work of other trades where necessary or required.
- B. Cutting and patching, drilling and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the Engineer.
- C. Contractor shall coordinate construction schedule with Owner and maintain public access to all portions of the site not actively under construction including providing temporary fencing as required to separate public use of areas and construction activities as directed by Owner.

1.11 CLEANUP AND DISPOSAL OF EXCESS MATERIAL

- A. During the course of the work, keep the site of operations as clean and neat as possible. Dispose of all residue resulting from the construction work and, at the conclusion of the work, remove and haul away any surplus excavation, broken pavement, demolished building materials, demolished chain link fence, grubbed stumps and boulders, lumber, equipment, temporary structures and any other refuse remaining from the construction operations and leave the entire site of the work in a neat and orderly condition.
- B. In order to prevent environmental pollution arising from the construction activities related to the performance of this Contract, comply with all applicable Federal, State and local laws and regulations concerning waste material disposal, as well as the specific requirements stated in this Section and in other related sections.
- C. Disposal of excess excavated material in wetlands, stream corridors and plains is strictly prohibited even if the permission of the property owner is obtained. Any violation of this restriction by the Contractor or any person employed by him will be brought to the immediate attention of the responsible regulatory agencies, with a request that appropriate action be taken against the offending parties. The Contractor will be required to remove the fill and restore the area impacted at no increase in the Contract Price.

1.12 FACILITY LAYOUT

- A. Contractor shall employ a Massachusetts Registered Land Surveyor to layout and locate the proposed improvements. The professional land surveyor shall be approved by the Engineer.

1.13 CONSTRUCTION STAGING

- A. In addition to providing staging area for the Contractors own operations, the Contractor shall coordinate and provide on-site staging area materials, and other subcontractors performing work under this contract.

END OF SECTION

SECTION 01060

PERMITS AND REGULATORY REQUIREMENTS

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Comply with all laws, rules, regulations, codes, and ordinances promulgated by any authority having jurisdiction over the Work at the existing site located in the City of Marlborough, Massachusetts.

1.02 RELATED SECTIONS

- A. Environmental Protection Procedures are included in Section 01110.
- B. Erosion and Sedimentation Control is included in Section 02270.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01300, copies of all necessary permits to the Engineer prior to starting any work for which a permit is required.

1.04 PERMITS OBTAINED BY CONTRACTOR

- A. The Contractor or its subcontractor shall be responsible for obtaining all permits, licenses, certifications or approvals required for the work of this contract. The Contractor's responsibility includes, but is not limited to, construction and other permits required for his equipment, work force, and of particular operations in the performance of the work or facility construction such as permits required for equipment, work force, stormwater and dewatering due to construction activities, transportation and storage of explosives, fuel storage, and air emission. Proper equipment shall be installed, tested and maintained in accordance with local, state and federal requirements. The Contractor shall also be responsible for scheduling and coordinating inspections and receipt of local or state permits/approvals/certifications not previously obtained by the Owner for any tanks, piping and associated appurtenances which are constructed, installed, tested or removed as part of this Contract. Receipt of approvals for storage and use of test chemicals/gases will be the responsibility of the Contractor.
- B. The Contractor shall be responsible for obtaining all permits for onsite storage of any fuels to be used during construction.
- C. Obtain all necessary permits from the state, City or other authorities having jurisdiction for the work and all other necessary building and construction operations requiring permits. Any damage caused by the operations to any street, or existing structure either above or below the ground surface shall be repaired at no additional expense to the Owner.

- D. Building permit fees shall not be required, and are hereby waived, for work done to buildings, structures, or parts thereof owned by the City of Marlborough and used for a public purpose by the city unless the contractor fails to obtain a building permit prior to the start of construction, the contractor shall then be required to pay three times the cost that the building permit fee would have been for that project.
- E. Copies of all necessary permits shall be submitted to and acknowledged by the Engineer prior to starting any work for which a permit is required.
- F. Contractor shall be responsible for obtaining all permits and facility approvals for the disposal of excavated soils and sediments.
- G. Contractor shall obtain and pay for all new permits or permit amendments required due to deviations from permit applications submitted by the Owner.
- H. Draft copies of all permit applications and all other information or documents intended to be submitted to regulatory authorities must be submitted to the Engineer a minimum of five days before the document is submitted to the permitting agency.
- I. Provide two copies of all permits obtained and of all notifications that permits are not required to the Engineer.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Stormwater Pollution Prevention
 - 1. Prepare and implement a site specific Stormwater Pollution Control Plan pursuant to the requirements of the MA DEP NPDES General Permit for the Discharge of Stormwater and Dewatering Wastewater Associated with Construction Activities. These plans shall apply to all construction activities on and off the site, including dewatering.
- B. Erosion and Sedimentation Control
 - 1. Submit a site specific Erosion and Sedimentation Control Plan to the Engineer for review.
- C. Environmental Requirements
 - 1. Comply with the applicable federal and state regulatory requirements including, but not limited to, the U.S. Army Corps of Engineers (ACOE), U.S. Environmental Protection Agency (EPA), Massachusetts Department of Environmental Protection (Mass DEP), Massachusetts Highway Department, Massachusetts Department of Public Health, and the City of Marlborough Department of Public Works.
 - 2. The Engineer or the Owner may restrict or stop any of Contractor's operations which fail to comply with the requirements of the Mass DEP. The Contractor's failure to comply and any subsequent stoppage shall not be cause for a change in Contract Price or Time.

3. The Contractor shall take measures to control the noise intensity to comply with the prescribed ratings as set forth by the regulations of the Department of Environmental Protection, the Occupational Safety and Health Administration and any other agency of the State or Federal government.
4. Refueling and maintenance of equipment on the project site shall be done in a manner to prevent any spills or releases of fuel, oil or other hazardous materials to the environment. Spill containment equipment shall be stored on-site in an easily accessible location. Used petroleum products resulting from the maintenance of construction equipment and from construction debris shall be collected and legally disposed of off-site. No on-site storage or disposal of these items is allowed.
5. The Contractor shall conduct the Work so that all environmental sign-offs and approvals are obtained.
6. The Contractor shall maintain copies of all issued permits, including any modifications, at the project site.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01110

ENVIRONMENTAL PROTECTION PROCEDURES

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment and perform all work required for the prevention of environmental pollution in conformance with applicable laws and regulations, during and as the result of construction operations under this Contract. For the purpose of this Section, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic and/or recreational purposes.
- B. The control of environmental pollution requires consideration of air, water and land, and involves management of noise and solid waste, as well as other pollutants.
- C. Schedule and conduct all work in a manner that will minimize the erosion of soils in the area of the work. Provide erosion control measures such as sediments fence, seeding, mulching or other special surface treatments as are required to prevent silting and muddying of streams, rivers, ponds, etc. All erosion control measures shall be in place in an area prior to any construction activity in that area. Specific requirements for erosion and sedimentation controls are specified in Section 02270.
- D. This Section is intended to ensure that construction is achieved with a minimum of disturbance to the existing ecological balance between a water resource and its surroundings. These are general guidelines. It is the Contractor's responsibility to determine the specific construction techniques to meet these guidelines.
- E. All phases of sedimentation and erosion control shall comply with and be subject to the approval of the Marlborough Conservation Commission and Massachusetts Department of Environmental Protection. Prepare sedimentation and erosion control drawings meeting the requirements for approval by that agency. Upon approval, furnish two copies of the approved Drawing to the Engineer.

1.02 APPLICABLE REGULATIONS

- A. Comply with all applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement.

1.03 NOTIFICATIONS

- A. The Engineer will notify the Contractor in writing of any non-compliance with the foregoing provisions or of any environmentally objectionable acts and corrective action to be taken. State or local agencies responsible for verification of certain aspects of the environmental protection requirements shall notify the Contractor in writing, through the Engineer, of any non-compliance with State or local requirements. After receipt of such notice from the Engineer or from the regulatory agency through the Engineer, immediately take corrective action. Such notice, when

delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor unless it is later determined that the Contractor was in compliance.

1.04 IMPLEMENTATION

- A. Prior to commencement of the work, meet with the Engineer and Owner to develop mutual understandings relative to compliance with these provisions and administration of the environmental pollution control program.
- B. Remove temporary environmental control features, when approved by the Engineer and incorporate permanent control features into the project at the earliest practicable time.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 EROSION CONTROL

- A. Erosion Control shall be as specified in Section 02270.

3.02 PROTECTION OF STREAMS AND SURFACE WATERS

- A. Take all precautions to prevent, or reduce to a minimum, any damage to any stream or surface water from pollution by debris, sediment or other material, or from the manipulation of equipment and/or materials in or near such streams. Water that has been used for washing or processing, that contains oils or sediments that will reduce the quality of the water in the stream, shall not be directly returned to the stream. Divert such waters through a settling basin or filter before being directed into streams or surface waters.
- B. Do not discharge water from dewatering operations directly into any live or intermittent stream, channel, wetlands, surface water or any storm sewer. Water from dewatering operations shall be treated by filtration, settling basins, or other approved method to reduce the amount of sediment contained in the water to allowable levels.
- C. Take all preventative measures to avoid spillage of petroleum products and other pollutants. In the event of any spillage, prompt remedial action shall be taken in accordance with a contingency action plan approved by the Massachusetts Department of Environmental Protection. Submit two copies of approved contingency plan to the Engineer.

3.03 PROTECTION OF LAND RESOURCES

- A. Restore land resources within the project boundaries and outside the limits of permanent work to a condition, after completion of construction that will appear to be natural and not detract from the appearance of the project. Confine all construction activities to areas shown on the Drawings.
- B. Outside of areas requiring earthwork for the construction of the new facilities, do not deface, injure, or destroy trees or shrubs, nor remove or cut them without prior approval. No ropes,

cables, or guys shall be fastened to or attached to any existing nearby trees for anchorage unless specifically authorized by the Engineer. Where such special emergency use is permitted, first wrap the trunk with a sufficient thickness of burlap or rags over which softwood cleats shall be tied before any rope, cable, or wire is placed. The Contractor shall in any event be responsible for any damage resulting from such use.

- C. Before beginning operations near them, protect trees that may possibly be defaced, bruised, injured, or otherwise damaged by the construction equipment, dumping or other operations, by placing boards, planks, or poles around them. Monuments and markers shall be protected similarly.
- D. Any trees or other landscape features scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to their original condition. The Engineer will decide the method of restoration to be used and whether damaged trees shall be treated and healed or removed and disposed of.
 - 1. All scars made on trees by equipment, construction operations, or by the removal of limbs larger than 1-in in diameter shall be coated as soon as possible with an approved tree wound dressing. All trimming or pruning shall be performed in an approved manner by experienced workmen with saws or pruning shears. Tree trimming with axes will not be permitted.
 - 2. Climbing ropes shall be used where necessary for safety. Trees that are to remain, either within or outside established clearing limits, that are subsequently damaged by the Contractor and are beyond saving in the opinion of the Engineer, shall be immediately removed and replaced.
- E. The locations of the Contractor's storage and other construction buildings required temporarily in the performance of the work, shall be cleared portions of the job site or areas to be cleared as shown on the Drawings and approved by the Engineer and shall not be within wetlands or floodplains. The preservation of the landscape shall be an imperative consideration in the selection of all sites and in the construction of buildings. Drawings showing storage facilities shall be submitted for approval of the Engineer.
- F. If the Contractor proposes to construct temporary roads or embankments and excavations for plant and/or work areas, he shall submit the following for approval at least ten days prior to scheduled start of such temporary work.
 - 1. A layout of all temporary roads, excavations, embankments and drainage to be constructed within the work area.
 - 2. Details of temporary road construction.
 - 3. Drawings and cross sections of proposed embankments and their foundations, including a description of proposed materials.
 - 4. A landscaping drawing showing the proposed restoration of the area. Indicate the proposed removal of any trees and shrubs outside the limits of existing clearing area. Indicate locations of guard posts or barriers required to control vehicular traffic and protect trees and shrubs to be maintained undamaged. The Drawing shall provide for the obliteration of construction scars as such and shall provide for a natural appearing final condition of the

area. Modification of the Contractor's approved drawings shall be made only with the written approval of the Engineer. No unauthorized road construction, excavation or embankment construction including disposal areas will be permitted.

- G. Remove all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess of waste materials, or any other vestiges of construction as directed by the Engineer. It is anticipated that excavation, filling and plowing of roadways will be required to restore the area to near natural conditions which will permit the growth of vegetation thereon. The disturbed areas shall be prepared and seeded as described in Section 02930.
- H. All debris and excess material will be disposed of offsite in a location approved by the Engineer.

3.04 PROTECTION OF AIR QUALITY

- A. Burning - The use of burning at the project site for the disposal of refuse and debris will not be permitted.
- B. Dust Control - Maintain all excavations, embankment, stockpiles, access roads, plant sites, waste areas, borrow areas and all other work areas within or without the project boundaries free from dust which could cause the standards for air pollution to be exceeded and which would cause a hazard or nuisance to others.
- C. An approved method of stabilization consisting of sprinkling or other similar methods will be permitted to control dust. The use of petroleum products is prohibited. The use of chlorides may be permitted with approval from the Engineer.
- D. Sprinkling, to be approved, must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times, and the Contractor shall have sufficient competent equipment on the job to accomplish this. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs, as determined by the Engineer.

3.06 NOISE CONTROL

- A. Make every effort to minimize noises caused by the construction operations. Equipment shall be equipped with silencers or mufflers designed to operate with the least possible noise in compliance with Federal and State regulations.

3.07 MAINTENANCE OF POLLUTION CONTROL FACILITIES DURING CONSTRUCTION

- A. Maintain all facilities constructed for pollution control as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created.

END OF SECTION

SECTION 01170

SPECIAL PROVISIONS

PART 1 GENERAL

1.01 GENERAL OBLIGATIONS OF THE CONTRACTOR

- A. General obligations of the Contractor shall be as set forth in the Contract Documents. All incidental work and expense in connection with the completion of work under the Contract will be considered a subsidiary obligation of the Contractor and all such costs shall be included in the appropriate items in the Bid Form in connection with which the costs are incurred.

1.02 SITE INVESTIGATION

- A. The Contractor shall satisfy himself as to the conditions existing within the project area, the type of equipment required to perform the work, the character, quality and quantity of the subsurface materials to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, as well as from information presented by the Drawings and related Sections. Any failure of the Contractor to acquaint himself with the available information will not relieve him from the responsibility for estimating properly the difficulty or cost of successfully performing the work. The Owner assumes no responsibility for any conclusions or interpretation made by the Contractor on the basis of the information made available by the Owner.

1.03 COORDINATION WITH LOCAL AGENCIES

- A. Coordinate all work performed under this contract with the Local Police Department, Fire Department, Department of Public Works, Building Inspector, Plumbing Inspector, Electrical Inspector, and other departments as necessary to complete the work under all local requirements.
- B. Notify the necessary parties immediately of any drain, electric or water main breaks.
- C. Provide the Owner with contact information where the Contractor may be reached when not at the site.

1.04 PUBLIC UTILITIES

- A. Comply with the requirements of the Commonwealth of Massachusetts Statute - Chapter 82, Section 40, for excavations in public and private property. Compliance shall include the following:
 - 1. Notify public utility companies in writing at least 72 hours (excluding Saturdays, Sundays and legal holidays) but not more than 30 days before excavating in areas where underground utilities (pipes, cables, manholes, etc) exist.
 - 2. Provide the Utility Companies with a schedule of the activities in areas where the utilities exist.

3. Notify utility companies of any damage to their utilities resulting from construction operations.
- B. Notify DIGSAFE at “811” at least 72 hours before digging, trenching, blasting, demolishing, boring, backfilling, grading, landscaping or other earth moving operations in any public ways, rights of way and easements.

1.05 PROGRESS SCHEDULE

- A. Submit a progress schedule before starting any work, in accordance with Article 2.6 of the General Conditions.
- B. Review the progress schedule with the Owner and Engineer on a weekly basis until project is complete and provisionally accepted by Owner. The progress schedule shall be adjusted as required in accordance with the General Conditions.

1.06 PROVISIONS FOR CONTROL OF EROSION

- A. Take sufficient precautions during construction to minimize the wind borne and stormwater run-off of polluting substances such as silt, clay, fuels, oils, bitumens and calcium chloride into drain systems within the project area and to adjacent off-site property. Special precautions shall be taken in the use of construction equipment to prevent operations, which promote loess and run-off erosion.

1.07 PERMITS

- A. Refer to Section 01060 for Permits and Regulatory Requirements.
- B. Obtain all necessary permits required for proper execution of the project. Fill out all forms and furnish all drawings required to obtain the permits. A copy of each permit shall be submitted to the Engineer and Owner.
- C. Work shall not commence on any phase of the work requiring a permit until the permit is obtained.
- D. Building permit fees within the City of Marlborough shall not be required, and are hereby waived, for work done to buildings, structures, or parts thereof owned by the City and used for a public purpose by the city unless the contractor fails to obtain a building permit prior to the start of construction, the contractor shall then be required to pay three times the cost that the building permit fee would have been for that project.

1.08 POLICE DETAILS

- A. The Contractor shall provide such police officers as the Owner, Chief of Police or Engineer deems necessary for the direction and control of traffic within the site of the improvements. The Contractor will be responsible for scheduling such officers through the police department. A minimum of two hours' notice is required for any detail cancellation.
- B. The Contractor shall be responsible for paying the detail officers for the time worked. Based on

the number of hours worked by the detail officer, the City will reimburse, from the Police Detail bid item, the Contractor for those costs upon submission by the Contractor of evidence that the Detail Officers were paid. There shall be no mark-up allowed for Contractor overhead, profit, or other costs. The Contractor shall only be reimbursed the actual invoiced cost for the Detail Officer. The City of Marlborough shall not reimburse the Contractor for any charges incurred as a result of the Contractor's failure to provide sufficient notice for cancellation of a detail.

- C. The intent of policing is to ensure public safety by direction of traffic. Police officers are not to serve as watchmen to protect the Contractor's equipment and materials.

1.09 SITE PHASING PLAN

- A. As per the Site Phasing Plan, the Contractor shall coordinate the direction and control of traffic and parking associated with the Bigelow School. The Contractor will be responsible for scheduling their work to maintain vehicular access for student drop-off to the Bigelow School and to provide parking for 20 vehicles throughout construction.
- B. The work in the parking lot to the east of the Bigelow school shall be phased to maintain ingress and egress continuously and to allow drop-off by school bus at the front of the school.
- C. During final paving of the parking lot, this work shall be phased to maintain both vehicular access and parking as noted.
- D. In the spring when it is anticipated that final paving will occur, the school is closed for April vacation from April 20, 2015 to April 24, 2015.

1.10 WORKING HOURS AND NOISE

- A. General prohibition of noise emissions. No person or persons owning, leasing or controlling the operation of any source or sources of noise shall willfully, negligently or through failure to provide the necessary equipment or facilities or to take necessary precautions permit the establishment of a condition of noise pollution.
- B. Specific prohibitions. All electric motors and internal-combustion engines employed in outdoor construction, demolition or earthmoving shall be prohibited from use every evening from 7:00 p.m. until 7:00 a.m. the following morning, except Sunday, when all such devices shall be prohibited from operating at any hour except by a variance issued by the Board of Health in accordance with the provisions of local regulation § 431-5, unless declared as emergency work pursuant to § 431-1B(2)(a).
- C. Work days for this project are anticipated to be Monday through Friday.

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 GENERAL

1.01 SUMMARY

A. This Section specifies requirements for Project meetings including:

1. Pre-Construction Conference
2. Pre-Installation Conferences
3. Progress Meetings
4. Special Meetings

1.02 PRE-CONSTRUCTION CONFERENCE

A. The ENGINEER will conduct a pre-construction conference after Notice to Proceed and prior to commencement of construction activities. The meeting shall cover the general features of the project and the various requirements of the Contract.

1. Attendees: The Owner, Engineer, the Contractor and its superintendent, subcontractors, suppliers, manufacturers and other concerned parties shall be represented by persons authorized to conclude matters relating to the Work.
2. Agenda: Discuss significant items that could affect progress of the Work, including the tentative construction schedule, critical sequencing, use of the premises, procedures for processing Change Orders and payment applications and equipment deliveries.
3. Location: To be determined by Owner.

1.03 PRE-INSTALLATION CONFERENCE

A. As required by the work, the Engineer may require a pre- installation conference before each activity that requires coordination with other construction activities. The installer and representatives of manufacturers and fabricators involved in the installation shall attend. The Engineer will advise the Contractor of scheduled meeting dates.

1. Review progress of other activities and preparations for the activity under consideration at each conference, including time schedules, manufacturer's recommendations, weather limitations, substrate acceptability, compatibility problems and inspection and testing requirements.
 2. Record significant discussions, agreements and disagreements of each conference, along with the approved schedule. Distribute the meeting record to everyone concerned, promptly, including the Owner and Engineer.
- B. The Contractor shall not proceed with the activity if the conference cannot be successfully concluded and it shall initiate necessary actions to resolve impediments and reconvene the conference at the earliest feasible date. The Contractor will have no claim for delay or related costs, expenses or damages, resulting from this procedure.

1.04 PROGRESS MEETINGS

- A. The Engineer will typically conduct progress meetings at least monthly but may have them every one to two weeks as required by the Work. If the Engineer determines additional meetings are necessary the Engineer will notify the Contractor of scheduled dates. The Contractor will attend said meetings at no additional cost to the Owner.
1. Attendees: The Owner, Engineer, the Contractor, each subcontractor, supplier or other entity concerned with progress or involved in planning, coordination or performance of future activities shall be represented by persons familiar with the Project and authorized to conclude matters relating to progress.
 2. Agenda: Review minutes of the previous progress meeting. Review significant items that could affect progress of the work. Include topics appropriate to the current status of the Project, such as:
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Review the present and future issues and needs of each entity present, including such items as:
 1. Time.
 2. Sequences and schedule.
 3. Deliveries.
 4. Off-site fabrication problems.

5. Site utilization.
6. Temporary facilities and services.
7. Hazards and risks.
8. Quality and Work standards.
9. Change Orders.
10. Documentation of information for payment requests.
11. Traffic management.
12. Other critical work items.

1.05 SPECIAL MEETINGS

- A. The Owner reserves the right to schedule special meetings as necessary to discuss issues or problems relating to the Project.

1. Attendees: The Owner, Engineer, Contractor, and other parties involved shall be represented by persons authorized to address such issues and problems.

1.06 REPORTING

- A. The Engineer shall distribute copies of minutes of the meeting to each party present and to parties who should have been present.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

- A. This Section specifies the general methods and requirements of submissions applicable to Shop Drawings, Product Data, Samples, and Construction Schedules. Additional general submission requirements are contained in Paragraphs 6.17 of the General Conditions. Detailed submittal requirements are specified in the technical Sections.
- B. All submittals shall be clearly identified by reference to Section Number, Paragraph, Drawing Number or Detail as applicable. Submittals shall be clear and legible and of sufficient size for presentation of data.

1.02 SHOP DRAWINGS, PRODUCT DATA, SAMPLES

A. Shop Drawings

- 1. Shop drawings as specified in individual Sections include, custom-prepared data such as fabrication and erection/installation (working) drawings, scheduled information, setting diagrams, actual shopwork manufacturing instructions, custom templates, coordination drawings, individual system or equipment inspection and test reports and certifications, as applicable to the work.
- 2. All shop drawings submitted by subcontractors shall be sent directly to the Contractor for checking. The Contractor shall be responsible for their submission at the proper time so as to prevent delays in delivery of materials.
- 3. Check all subcontractor's shop drawings regarding measurements, size of members, materials and details to make sure that they conform to the intent of the Drawings and related Sections. Return shop drawings found to be inaccurate or otherwise in error to the subcontractors for correction before submission thereof.
- 4. All details on shop drawings shall show clearly the relation of the various parts to the main members and lines of the structure and where correct fabrication of the work depends upon field measurements, such measurements shall be made and noted on the drawings before being submitted.

B. Product Data

- 1. Product data as specified in individual Sections include, standard prepared data for manufactured products (sometimes referred to as catalog data), such as the manufacturer's product specification and installation instructions, availability of colors and patterns, manufacturer's printed statements of compliances and applicability, roughing-in diagrams and templates, catalog cuts, product photographs, standard wiring diagrams, printed

performance curves and operational-range diagrams, production or quality control inspection and test reports and certifications, mill reports, product operating and maintenance instructions and recommended spare-parts listing and printed product warranties, as applicable to the work.

C. Samples

1. Samples specified in individual Sections include, physical examples of the work such as sections of manufactured or fabricated work, small cuts or containers of materials, complete units of repetitively-used products, color/texture/pattern swatches and range sets, specimens for coordination of visual effect, graphic symbols and units of work to be used by the Engineer or Owner for independent inspection and testing, as applicable to the work.

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. Review shop drawings, product data and samples, including those by subcontractors, prior to submission to determine and verify the following:
 1. Field measurements
 2. Field construction criteria
 3. Catalog numbers and similar data
 4. Conformance with related Sections
- B. Each shop drawing, sample and product data submitted by the Contractor shall have affixed to it the following Certification Statement including the Contractor's Company name and signed by the Contractor: "Certification Statement: by this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements." Shop drawings and product data sheets 11-in x 17-in and smaller shall be bound together in an orderly fashion and bear the above Certification Statement on the cover sheet. The cover sheet shall fully describe the packaged data and include a listing of all items within the package.
- C. Notify the Engineer in writing, at the time of submittal, of any deviations in the submittals from the requirements of the Contract Documents.
- D. The review and approval of shop drawings, samples or product data by the Engineer shall not relieve the Contractor from the responsibility for the fulfillment of the terms of the Contract. All risks of error and omission are assumed by the Contractor and the Engineer will have no responsibility therefor.
- E. No portion of the work requiring a shop drawing, sample, or product data shall be started nor shall any materials be fabricated or installed prior to the approval or qualified approval of such item. Fabrication performed, materials purchased or on-site construction accomplished which does not conform to approved shop drawings and data shall be at the Contractor's risk. The

Owner will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity.

- F. Project work, materials, fabrication, and installation shall conform with approved shop drawings, applicable samples, and product data.

1.04 SUBMISSION REQUIREMENTS

- A. Make submittals promptly in accordance with approved schedule and in such sequence as to cause no delay in the Work or in the work of any other contractor.
- B. Each submittal, appropriately submitted and coded will be returned within 15 business days following receipt of the submittal by the Engineer.
- C. Number of submittals required:
 - 1. Shop Drawings and submittals for building permit: five copies.
 - 2. Product Data: Four copies.
 - 3. Samples: Submit the number stated in the respective Sections.
- D. Submittals shall contain:
 - 1. The date of submission and the dates of any previous submissions.
 - 2. The Project title and number.
 - 3. Contractor identification.
 - 4. The names of:
 - a. Contractor
 - b. Supplier
 - c. Manufacturer
 - 5. Identification of the product, with the section number, page and paragraph(s).
 - 6. Field dimensions, clearly identified as such.
 - 7. Relation to adjacent or critical features of the work or materials.
 - 8. Applicable standards, such as ASTM or Federal Standards numbers.
 - 9. Identification of deviations from Contract Documents.
 - 10. Identification of revisions on resubmittals.

1.05 REVIEW OF SHOP DRAWINGS, PRODUCT DATA, WORKING DRAWINGS AND SAMPLES

- A. The review of shop drawings, data and samples will be for general conformance with the design concept and Contract Documents. They shall not be construed:
1. as permitting any departure from the Contract requirements;
 2. as relieving the Contractor of responsibility for any errors, including details, dimensions, and materials;
 3. as approving departures from details furnished by the Engineer, except as otherwise provided herein.
- B. The Contractor remains responsible for details and accuracy, for coordinating the work with all other associated work and trades, for selecting fabrication processes, for techniques of assembly, and for performing work in a safe manner.
- C. If the shop drawings, data or samples as submitted describe variations and show a departure from the Contract requirements which Engineer finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or Contract Time, the Engineer may return the reviewed drawings without noting an exception.
- D. Submittals will be returned to the Contractor under one of the following codes.

Code 1 - "APPROVED" is assigned when there are no notations or comments on the submittal. When returned under this code the Contractor may release the equipment and/or material for manufacture.

Code 2 - "APPROVED AS NOTED". This code is assigned when a confirmation of the notations and comments IS NOT required by the Contractor. The Contractor may release the equipment or material for manufacture; however, all notations and comments must be incorporated into the final product.

Code 3 - "APPROVED AS NOTED/CONFIRM". This combination of codes is assigned when a confirmation of the notations and comments IS required by the Contractor. The Contractor may, at his own risk, release the equipment or material for manufacture; however, all notations and comments must be incorporated into the final product. This confirmation shall specifically address each omission and nonconforming item that was noted. Confirmation is to be received by the Engineer within 15 calendar days of the date of the Engineer's transmittal requiring the confirmation.

Code 4 - "APPROVED AS NOTED/RESUBMIT". This combination of codes is assigned when notations and comments are extensive enough to require a resubmittal of the package. This resubmittal is to address all comments, omissions and non-conforming items that were noted. Resubmittal is to be received by the Engineer within 15 calendar days of the date of the Engineer's transmittal requiring the resubmittal.

Code 5 - "NOT APPROVED" is assigned when the submittal does not meet the intent of the Contract Documents. The Contractor must resubmit the entire package revised to bring the submittal into conformance. It may be necessary to resubmit using a different manufacturer/vendor to meet the Contract Documents.

Code 6 - "COMMENTS ATTACHED" is assigned where there are comments attached to the returned submittal which provide additional data to aid the Contractor.

Code 7 - "RECEIPT ACKNOWLEDGED" This code is assigned to acknowledge receipt of a submittal that is not subject to the Engineer's review and approval; and, is being filed for informational purposes only. This code is generally used in acknowledging items such as, but not limited to receipt of means and methods of construction, work plans, field conformance test reports, and Health and Safety plans.

Codes 1 through 5 designate the status of the reviewed submittal with Code 6 showing there has been an attachment of additional data.

- E. Resubmittals will be handled in the same manner as first submittals. On resubmittals the Contractor shall identify all revisions made to the submittals, either in writing on the letter of transmittal or on the shop drawings by use of revision triangles or other similar methods. The resubmittal shall clearly respond to each comment made by the Engineer on the previous submission. Additionally, the Contractor shall direct specific attention to any revisions made other than the corrections requested by the Engineer on previous submissions.
- F. Partial submittals may not be reviewed. The Engineer will be the only judge as to the completeness of a submittal. Submittals not complete will be returned to the Contractor and will be considered "Not Approved" until resubmitted. The Engineer may at his option provide a list or mark the submittal directing the Contractor to the areas that are incomplete.
- G. If the Contractor considers any correction indicated on the shop drawings to constitute a change to the Contract Documents, the Contractor shall give written notice thereof to the Engineer at least 7 working days prior to release for manufacture.
- H. When the shop drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

1.06 DISTRIBUTION

- A. Distribute reproductions of approved shop drawings and copies of approved product data and samples, where required, to the job site file and elsewhere as directed by the Engineer. Number of copies shall be as directed by the Engineer but shall not exceed five.

1.07 SCHEDULES

- A. Provide all schedules required by Articles 2.05.B, 2.06, 2.07, 14.01, and elsewhere in the General Conditions.

1.08 GENERAL PROCEDURES FOR SUBMITTALS

- A. Coordination of Submittal Times: Prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work of other related Sections, so that the installation will not be delayed by processing times including disapproval and resubmittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery and similar sequenced activities. No extension of time will be authorized because of the Contractor's failure to transmit submittals sufficiently in advance of the Work.

1.09 RECORD DRAWINGS AND PROJECT MANUALS

- A. Maintain and provide all record documents per Articles 6.12 in the General Conditions. Contractor shall provide progress record drawings with each payment request. Upon project completion, the Contractor shall deliver record drawings per Section 01700.
- B. Provide Project Operation and Maintenance Manuals per Section 01700.

1.10 CONSTRUCTION PHOTOS

- A. Contractor shall be responsible for taking digital photography of the before, during and after completion of the work. Digital photographs shall be clear images of high quality, such that individual digital photo file size is not less than 1 MB each.
- B. Contractor shall take a minimum of forty (40) digital photos of existing site conditions as directed by Engineer. These shall be submitted on a CD to the Engineer with the first payment requisition.
- C. The Contractor shall take digital photos daily as construction progresses, especially detailing critical items if construction such as drainage structure installation, points of connection, etc. Not less than 6 (six) digital photos shall be taken each day, detailing the overall progress of the work.
- D. All digital photographs shall be submitted by the Contractor on a CD with each payment requisition.
- E. Contractor shall take a minimum of forty (40) digital photos of the completed site. These shall be submitted on a CD to the Engineer with the final payment requisition.
- F. All construction photos shall be submitted to the Engineer regularly during the construction contract and at Completion with final payment requisition.

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, equipment, materials, and incidentals necessary and provide separate temporary facilities for the Contractor's use and the Engineer's use, as specified herein and as shown on the drawings.
- B. Operate and maintain temporary facilities for the duration of the project and as directed by the Engineer. All cost and use charges for temporary facilities shall be included in the Contract Price.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Temporary Fence: Fabric shall be No. 9 gauge galvanized wire woven in 2-in diamond mesh with top and bottom twisted selvage. Intermediate and terminal posts shall be galvanized steel H or pipe, minimum 2-3/8-in OD line posts, 2-7/8-in OD corner and pull posts, and 1-5/8-in OD top rails.
- B. Project Sign: Plywood shall be A-A EXT-APA grade, 1-in thick. Posts and braces shall be pressure treated lumber.

2.02 EQUIPMENT

- A. Fire Extinguishers: Provide portable, UL-rated with class and extinguishing agent required by locations and classes of fire exposure. Provide at least one for each trailer/office.

PART 3 EXECUTION

3.01 CONTRACTOR'S FIELD OFFICE

- A. Provide a temporary field office for the Contractor's use, but accessible during work hours by the Engineer and Owner, for the duration of the project. Field office shall require only a table capable of maintaining a full size set of contract documents (drawings and specifications) at all times. On-site discussions with the Contractor, Engineer and Owner may occur in this area. Contractor field office can be an on-site construction trailer, storage trailer, shed or other enclosed space capable of maintaining the project contract documents for the duration of the project. Contractor's vehicle may not be considered the contractor's field office.

3.02 CONTRACTOR'S PARKING

- A. It is anticipated that contractor parking will occur on site, in an area designated by the Owner.

3.03 TEMPORARY WATER

- A. The Owner shall provide all water, where City owned hydrants exist, for construction purposes to the Contractor without charge. The Contractor will need to provide a hydrant gate and wrench. A testable R.P.Z Backflow Device, minimum 1-inch or airgap inspected by the Owner shall be provided and used by the Contractor. The wasting of water shall be sufficient cause for withdrawing the privilege of unrestricted use.
- B. Install branch piping with taps located so that water is available throughout the construction by the use of hoses. Protect piping and fittings against freezing as applicable to the work site.

3.04 TEMPORARY SANITARY FACILITIES

- A. Provide sanitary facilities as single occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed in a fiberglass or other approved non-absorbent shell, in compliance with all Federal, State and Local laws and regulations
- B. Service, clean and maintain facilities and enclosures.

3.05 TEMPORARY LIGHT AND POWER FOR FIELD WORK

- A. Furnish temporary light and power, including 220 volt service for welding, complete with wiring, lamps and similar equipment as required to adequately light all work areas and with sufficient power capacity to meet the reasonable needs of all his/her subcontractors. Contractor shall make all necessary arrangements with the local electric company for temporary electric service and shall pay all expenses in connection therewith.
- B. Install circuit and branch wiring, with area distribution boxes located so that power and lighting is available throughout the construction by the use of construction-type power cords.

3.08 TEMPORARY FENCE

- A. Provide temporary fence to maintain site security as directed by Owner, as specified herein.
 - 1. Provide 6-ft high chain link fence with at least two vehicle and two pedestrian access gates. Gates shall be equipped with locking hardware and padlocks. Furnish two sets of keys to Engineer and Owner. Coordinate with local first responders for access during non-work hours.
 - 2. Fence installation shall comply with ASTM F567. Post spacing shall not exceed 8-ft on center. Posts shall be set plumb in concrete footings.
 - 3. Perform daily inspections of fence and immediately repair or replace damaged or compromised sections and as directed by the Engineer.

3.09 REMOVAL AND RESTORATION

- A. Remove each temporary facility complete when need for its service has ended and as approved by the Engineer. Coordinate removal of temporary facilities with authorities having jurisdiction.
- B. Restore all improvements damaged by the installation, operation, and removal of the temporary facilities. Obtain prior approval from Owner and Engineer for restoration work.

END OF SECTION

SECTION 01562

DUST CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section of the Specifications covers the control of dust throughout the project area, precipitated by, or incidental to, the operations or actions of the Contractor in the performance of the work herein contracted for.
- B. The work includes furnishing all the necessary or required labor, equipment, tools and materials for the purpose of allaying dust conditions to the satisfaction of the Engineer.

1.02 RELATED WORK

- A. Section 01110 Environmental Protection.
- B. Section 02270 Erosion and Sedimentation Control

PART 2 - PRODUCTS

2.01 CALCIUM CHLORIDE

- A. Calcium Chloride shall conform to the requirements of AASHTO M144, Type I or Type II and ASTM "Specification for Calcium Chloride," ASTM D98, latest revision. The calcium chloride shall be packaged in moisture-proof bags or airtight drums marked with the manufacturer's name, name of product, date of manufacture, net weight and percentage of calcium chloride guaranteed by the manufacturer, all legibly marked on each container.
- B. Calcium chloride failing to meet the requirements of the aforementioned specifications, or that which has become caked or sticky in shipment, etc., may be subject to rejection at the discretion of the Engineer.

2.02 WATER

- A. Water shall be reasonably clean, shall not be salty or brackish, and shall be free from petroleum products, acids, injurious alkalis and vegetable matter or other deleterious material. The water shall be tested in accordance with AASHTO Method T26 (except if water originates from a potable water source).

2.03 REGULATORY REQUIREMENTS

- A. The Contractor shall comply with all the applicable requirements of federal, state, municipal or local conservation/wetlands/watercourses authority having jurisdiction in such matters.

2.04 REFERENCES

- B. Product Manufacturer's "Material Safety Data Sheet".

PART 3 - EXECUTION

3.01 DUST CONTROL

- A. The Contractor shall maintain as much of the existing vegetation as is practicable in non-paved areas.
- B. The Contractor shall utilize phasing of construction as may be practicable to reduce the extent of disturbed area at any given location.
- C. The Contractor shall utilize temporary mulching and/or temporary vegetative cover applications in non-paved areas disturbed by construction to reduce the need for dust control.
- D. The Contractor shall utilize mechanical sweepers on paved surfaces, as necessary, to prevent dust build-up.
- E. Water utilized for dust control, will be applied with suitable equipment, such as tank trucks, tanks, pipelines or other devices approved by the Engineer capable of applying a uniform spread of water over the surface receiving treatment. The equipment shall have a suitable device for positive shut-off and regulating the flow of water to permit positive operator control.
Municipal water for dust control may be obtained from a hydrant, to be metered and maintained by the City of Marlborough, Department of Public Works – Water and Sewer Discussion with 24 hour notice by contacting David Lavallo – General Foreman at (508) 624-6910 Ext. 7401 or Dispatch at Ext. 7300. Water taken from a City hydrant shall be taken without charge, if the aforementioned protocol is adhered to.
- F. Where calcium chloride is utilized for dust control, the calcium chloride shall be either loose dry flakes or granules fine enough to be fed through a spreader or similar device, at a rate that will keep the treated surface moist, but not cause pollution or plant damage. Calcium chloride shall be applied utilizing equipment that permits uniform distribution over the entire area receiving treatment. Treatment shall be applied only at locations as directed by the Engineer. The Contractor shall exercise the proper precautionary procedures and measures regarding the storage, handling and application of calcium chloride in concert with the manufacturer's recommendations, the products "Material Safety Data Sheet" and the directions of the Engineer.
- G. The Contractor will be responsible for taking all the necessary precautions to avoid entry of calcium chloride into sewers and drains, brooks, streams or other water bodies and drinking water sources.
- H. Repetitive treatments of dust control measures shall be applied as needed or directed to accomplish dust control, at no additional cost to the Owner.

END OF SECTION

SECTION 01600

DELIVERY, STORAGE AND HANDLING

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. This Section specifies the general requirements for the delivery handling, storage and protection for all items required in the construction of the work. Specific requirements, if any, are specified with the related item.

1.02 TRANSPORTATION AND DELIVERY

- A. Transport and handle items in accordance with manufacturer's instructions.
- B. Schedule delivery to reduce long term on-site storage prior to installation and/or operation. Under no circumstances shall equipment be delivered to the site more than one month prior to installation without written authorization from the Engineer.
- C. Coordinate delivery with installation to ensure minimum holding time for items that are hazardous, flammable, easily damaged or sensitive to deterioration.
- D. Deliver products to the site in manufacturer's original sealed containers or other packing systems, complete with instructions for handling, storing, unpacking, protecting and installing.
- E. All items delivered to the site shall be unloaded and placed in a manner which will not hamper the Contractor's normal construction operation or those of subcontractors and other contractors and will not interfere with the flow of necessary traffic.
- F. Provide necessary equipment and personnel to unload all items delivered to the site.
- G. Promptly inspect shipment to assure that products comply with requirements, quantities are correct and items are undamaged. For items furnished by others (i.e. Owner, other Contractors), perform inspection in the presence of the Engineer. Notify Engineer verbally, and in writing, of any problems.
- H. If any item has been damaged, such damage shall be repaired at no additional cost to the Owner.

1.03 STORAGE AND PROTECTION

- A. Store and protect products in accordance with the manufacturer's instructions, with seals and labels intact and legible. Storage instruction shall be studied by the Contractor and reviewed with the Engineer by him/her. Instruction shall be carefully followed and a written record of this kept by the Contractor. Arrange storage to permit access for inspection.
- B. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

- C. Cement and lime shall be stored under a roof and off the ground and shall be kept completely dry at all times. All structural, miscellaneous and reinforcing steel shall be stored off the ground or otherwise to prevent accumulations of dirt or grease and in a position to prevent accumulations of standing water and to minimize rusting. Beams shall be stored with the webs vertical. Precast concrete shall be handled and stored in a manner to prevent accumulations of dirt, standing water, staining, chipping or cracking. Brick, block and similar masonry products shall be handled and stored in a manner to reduce breakage, cracking and spalling to a minimum.
- D. All mechanical and electrical equipment and instruments subject to corrosive damage by the atmosphere if stored outdoors (even though covered by canvas) shall be stored in a weathertight building to prevent injury. The building may be a temporary structure on the site or elsewhere, but it must be satisfactory to the Engineer. Building shall be provided with adequate ventilation to prevent condensation. Maintain temperature and humidity within range required by manufacturer.
1. All equipment shall be stored fully lubricated with oil, grease and other lubricants unless otherwise instructed by the manufacturer.
 2. Moving parts shall be rotated a minimum of once weekly to ensure proper lubrication and to avoid metal-to-metal "welding". Upon installation of the equipment, the Contractor shall start the equipment, at least half load, once weekly for an adequate period of time to ensure that the equipment does not deteriorate from lack of use.
 3. Lubricants shall be changed upon completion of installation and as frequently as required thereafter during the period between installation and acceptance. New lubricants shall be put into the equipment at the time of acceptance.
 4. Prior to acceptance of the equipment, the Contractor shall have the manufacturer inspect the equipment and certify that its condition has not been detrimentally affected by the long storage period. Such certifications by the manufacturer shall be deemed to mean that the equipment is judged by the manufacturer to be in a condition equal to that of equipment that has been shipped, installed, tested and accepted in a minimum time period. As such, the manufacturer will guaranty the equipment equally in both instances. If such a certification is not given, the equipment shall be judged to be defective. It shall be removed and replaced at the Contractor's expense.
- E. All paint and other coating products shall be stored in areas protected from the weather. Follow all storage requirements set forth by the paint and coating manufacturers.

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Closeout procedures
- B. Final cleaning
- C. Adjusting
- D. Project record documents
- E. Warranties
- F. Spare parts and maintenance materials

1.02 RELATED SECTIONS

- A. Section 02901 – Miscellaneous Work and Cleanup

1.03 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer.
- B. Provide submittals to Engineer that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- D. Submit Project Record Documents

1.04 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Clean surfaces exposed to view.
- C. Clean equipment and fixtures to a sanitary condition.
- D. Clean site; sweep paved areas, rake clean landscaped surfaces.
- E. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.05 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

1.06 PROJECT RECORD DOCUMENTS

- A. Pursuant to the General Conditions, the Contractor shall maintain at the site for the Owner, readily available to Owner and/or Engineer for inspection, one record copy of all Drawings, Specifications, Addenda, Change Orders, and other Modifications, in good order and market currently to record all changes made during construction, and approved Shop Drawings, Product Data and Samples. The Engineer will periodically inspect these record drawings, and their proper maintenance shall be a condition precedent to approval of requisitions for periodic payments. All the record documents, shop drawings, product data, and samples shall be made available to the Engineer and shall be delivered to him for the Owner upon completion of the work.

Maintain on site, one set of the following record documents; record actual revisions to the Work:

1. Contract Drawings
 2. Specifications
 3. Addenda
 4. Change Orders and other Modifications to the Contract
 5. Reviewed shop drawings, product data, and samples.
- B. Store Record Documents separate from documents used for construction.
 - C. Record information concurrent with construction progress.
 - D. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 1. Manufacturer's name and product model and number
 2. Product substitutions or alternates utilized
 3. Changes made by Addenda and Modifications.
 - E. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
 1. Spot elevations of the constructed, finish elevations.
 - a. Document as-built spot elevations at all drainage structure rims, high points, low points, utility structures, and at all locations where proposed spot elevations are shown on the Drawings.

2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 3. Field changes of dimension and detail.
 4. Details not on original Contract Drawings.
- F. In addition, at the completion of the work, the contractor shall provide a set of marked-up working drawings showing as built changes to the original construction plans to the Engineer.
- G. At time of substantial completion, submit final Project Record Documents to Engineer, with claim for final Application for Payment.

1.07 AS-BUILT DRAWINGS

- A. Upon project completion, the contractor shall prepare an As-Built Survey in AutoCAD format, prepared by a Massachusetts Registered Land Surveyor. As-built information shall include all new surface features; surface grades as well as all newly installed subsurface utilities with details and ties to insure they can be field located, as approved by Engineer.
- B. As -built drawings shall be submitted with final payment request and are a condition of receiving final project payment.

1.08 WARRANTIES

- A. Provide duplicate notarized copies.
- B. Execute and assemble documents from Subcontractors, suppliers and manufacturers.
- C. Provide Warranties with durable plastic covers within Operation and Maintenance Manual.
- D. Submit prior to final Application for Payment.
- E. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.09 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.
- B. Deliver to and place in location as directed. Obtain receipt prior to final payment.

1.10 OPERATIONS AND MAINTENANCE MANUAL

- A. The Contractor shall prepare and deliver to the Engineer for approval and transmittal to Owner three (3) copies of and Operations and Maintenance Manual with information as described above in Project Record Documents.

- B. The document shall also include service, maintenance and cleaning instructions for all manufactured products, finishes, and systems.
- C. Each volume of the manual shall be clearly indexed, and shall include a directory of all Subcontractors, material suppliers, local maintenance organizations, indicating the area of responsibility of each, and the name and telephone number of the responsible member of each organization.
- D. All material shall be bound in order and sequence conforming to the Specification numbering system. Typewritten, drawn or photographic materials shall be protected by clear plastic sleeves.
- E. Operations and Maintenance Manuals shall be submitted with final payment request and are a condition of receiving final project payment.

END OF SECTION