

AMESBURY HERITAGE PARK  
BROWNFIELD SOILS REMOVAL AND REMEDIATION

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 Amesbury, Massachusetts, at 25 & 31 Water Street as indicated on the Contract Documents.

1.02 SCOPE OF WORK:

- A. Furnish all labor, materials, equipment and incidentals necessary to complete all work necessary to remove and dispose of contaminated materials to a depth of approximately eighteen inches, remove and dispose of foundation walls, concrete slab, and existing asphalt walkway, backfill with acceptable materials and construct a temporary walkway.
- B. The Work includes, but is not necessarily limited to, the following major items:
  - 1. Installation of 570 lineal feet erosion control and sedimentation devices.
  - 2. Remove and relocate shed, R.R. crossing signal, track switch.
  - 3. Demolition and removal of 2600 square feet of asphalt bike path.
  - 4. Removal and disposal of contaminated soils to an average depth of approximately eighteen inches (18"). Removal and disposal of concrete pad and foundation walls.
  - 5. Replacement of soils with twelve inches (12") of acceptable gravel materials.
  - 6. Provide six inches (6") loam. Seed with \_\_\_\_.
  - 7. Construct temporary 300' bike path.
  - 8. Project management that includes coordination with utilities i.e., gas, underground cable, electric, water and sewer.
  - 9. Installation of 650 linear feet of construction / safety fencing along bikepath / walkway.
  - 10. Removal and installation of 250' of post & rail fence.

1.03 WORK SEQUENCE

- A. The Contractor shall submit to the Engineer for review a sequence of operations, giving detailed plans and schedules of his proposed operations. Said sequence of operations shall be accepted by the Engineer prior to the start of the work. The sequence shall be periodically updated as requested by the Engineer.

1.04 CONTRACTOR'S USE OF PREMISES:

- A. Contractor shall limit the use of the premises for the performance of the work and storage of materials and equipment to allow for the Owner's use as needed.
- B. Contractor shall coordinate with Owner necessary access for normal maintenance requirements.
- C. Contractor shall assume full responsibility for security of all his and his subcontractors materials and equipment stored on the site.

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- D. If directed by the Owner, Contractor shall move any stored items which interfere with operations of the Owner.
- E. Obtain and pay for use of additional storage or work areas if needed to perform the Work.
- F. Contractor shall provide a relocated pedestrian walking path after consultation with the owner.

END OF SECTION

SECTION 01046

CONTROL OF WORK

PART 1 – GENERAL

1.01 HOURS OF CONSTRUCTION:

- A. Normal construction activity shall take place only between the hours of 7:00 a.m. to 5:00 p.m., excluding Saturdays, Sundays, and legal holidays. Work outside the above time periods will be permitted only on an emergency basis and only with the approval of the Owner.

1.02 OCCUPYING PRIVATE LAND:

- A. The Contractor shall not (except after written consent from the proper parties) enter or occupy with men, tools, materials, or equipment any land outside the property of the Owner. A copy of the written consent shall be given to the Engineer.

1.03 PIPE LOCATIONS:

- A. Pipelines will be located substantially as indicated on the Drawings, but the is advised to take precautions to verify location.

1.04 DIMENSION OF EXISTING STRUCTURES:

- A. Where the dimensions and locations of existing structures are of importance in connection with any part of the Work, the Contractor shall verify such dimensions and locations in the field.

1.05 INTERFERENCE WITH AND PROTECTION OF STREETS:

- A. The Contractor shall not close or obstruct any portion of a street, road, or private way without obtaining permits from the proper authorities. If any street, road or private way shall be rendered unsafe by the Contractor's operations, he shall provide such temporary ways or guards as shall be acceptable to the proper authorities.
- B. The Contractor shall, at least 48 hours in advance, notify the Police and Fire Departments in writing, with a copy to the Engineer, if the closure of a street or road is necessary. He shall cooperate with the Police Department in the establishment of alternate routes and shall provide adequate detour signs, plainly marked and well lighted, in order to minimize confusion. Street closures are to be kept to a minimum.

1.06 CARE AND PROTECTION OF PROPERTY:

- A. The Contractor shall be responsible for the preservation of all public and private property, and shall 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, such property shall be restored by the Contractor, at his expense, to a condition similar to equal to that existing before the damage was done, or he shall make good the damage in other manner acceptable to the Engineer.

1.07 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES:

- A. The Contractor shall 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, and electric and telephone cables, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such structures and utilities from injury of any kind. Any damage resulting from the Contractor's operations shall be repaired by him at his expense.
- B. The Contractor shall be responsible for determining the location of existing services and obtaining all locations of underground structures and utilities (including existing water services, drain lines, and sewers). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by the Contractor.
- C. If, in the opinion of the Engineer, relocation of a privately owned utility is required, the Owner will notify the Utility to perform the work as expeditiously as possible. The Contractor shall fully cooperate with the Owner and Utility, and shall have no claim for delay due to such relocation. The Contractor shall notify all utility companies in writing at least 72 hours (excluding Saturdays, Sundays, and legal holidays) before excavating in any public way. Contractor shall also notify Massachusetts Dig Safe, telephone number 1-800-322-4844, at least 72 hours prior to start of work.

1.08 INSPECTION OF WORK AWAY FROM THE SITE:

- A. If work to be done away from the construction site is to be inspected on behalf of the Owner during its fabrication, manufacture, or testing, or before shipment, the Contractor shall give notice to the Engineer of the place and time where such fabrication, manufacture, testing, or shipping is to be done. Such notice shall be in writing and delivered to the Engineer in ample time so that the necessary arrangements for the inspection can be made.

1.09 COOPERATION WITHIN THIS CONTRACT:

- A. All firms or persons authorized to perform any work under this Contract shall cooperate with General Contractor and his Subcontractors or trades, and shall 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 or directed by the Engineer.

1.10 CLEANUP AND DISPOSAL OF EXCESS MATERIAL:

- A. During the course of the work, the Contractor shall keep the site of his operations in as clean and as neat a condition as is possible. He shall dispose of all residues resulting from the construction work and, at the conclusion of the work; he shall remove and haul away any surplus lumber, equipment, temporary structures, and any other refuse remaining from the construction operations, and shall leave the entire site of the work in a neat and orderly condition.

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- B. In order to prevent environmental pollution arising from the construction activities related to the performance of the Contract, the Contractor and his subcontractors shall 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 elsewhere in the Specifications.
- C. The Contractor's attention is directed to the fact that the Owner does not own and operate a disposal site for construction materials and/or debris removed from site as specified herein. The disposal of such material, including the location of a disposal site, shall be the sole responsibility of the Contractor.

END OF SECTION

SECTION 01063

MISCELLANEOUS REQUIREMENTS

PART 1 – GENERAL

1.01 SCOPE OF WORK:

- A. The Contractor shall conform to all miscellaneous requirements as herein specified.

1.02 INTERFERENCE WITH EXISTING WORKS:

- A. The Contractor shall at all times conduct his operations so as to interfere as little as possible with existing works. The Contractor shall develop a program, in cooperation with the Engineer and interested officials, which shall provide for pedestrian access through the area to the Amesbury Riverwalk / Bikeway.
- B. The Contractor shall make such minor modifications in the work relating to existing structures as may be necessary, without additional compensation.
- C. The Contractor shall have no claim for additional compensation by reason of delay or inconvenience in adapting his operations to meet the above requirements.

1.03 HYDRAULIC UPLIFT OF STRUCTURES:

- A. The Contractor shall be responsible for the protection of all structures against hydraulic uplift until such structures have been accepted finally by the Owner.

1.04 EXISTING UTILITIES:

- A. The Contractor's attention is directed to the fact that there are existing utilities in close proximity and that care shall be taken to prevent interruption of service or damage to the utilities.
- B. When encountered, existing utilities shall be properly supported and protected during the construction work, and the Engineer shall be notified. The operation of existing utilities shall not be interrupted except with written permission of the operation and Owner of such utilities. The Contractor shall allow ample time for all measures required for the continuance of existing utility operations. All damage to existing utilities shall be repaired, by the Contractor at his own expense or the Contractor shall make prompt and full restitution for repair by others and for all disruption caused by his operations.
- C. The Contractor shall comply with all requirements placed upon him by the utility organizations involved.

1.05 INSPECTION OF THE WORK

- C. The contractor shall maintain contact with the engineer and be able to provide information needed by the engineer at all times during demolition and construction of the project. The City reserves the right to inspect the construction at any time during construction.

1.06 COORDINATION

- D. The Contractor shall coordinate his work with work conducted by others in this area.
- E. The Contractor's attention is directed to the fact that the work to be done under this Contract is only part of a program of improvements and that the successful operation of the improvements is dependent upon the completion of the work under this Contract.
- F. It is essential that all parties interested in the project cooperate to the end that the entire project will be brought to a successful conclusion as rapidly as possible, but the Owner cannot guarantee that no interference or delay will be caused thereby. Interference and delay resulting from such cooperation shall not be the basis of claims against the Owner.

1.07 PEDESTRIAN PATHWAY:

- A. Provision shall be made for safe passage at all times for pedestrians using the existing or relocated Riverwalk. In the case of closure of the pathway, the Contractor is to work with the Police Department to establish alternate routes which shall be marked with adequate detour signs and well lit in order to minimize confusion.

1.08 STAGING AREAS:

- A. The Contractor is responsible for leasing or by otherwise obtaining staging areas that are needed to construct the work under this Contract.

1.09 PRECONSTRUCTION SURVEY:

- A. Prior to any construction involving demolition of property, the Contractor shall furnish to the Engineer a sufficient number of 3-in. by 5-in. color photographs to adequately show the existing conditions prior to the start of the work. If in the opinion of the Engineer sufficient photographs have not been submitted to show preconstruction conditions, said Engineer may order additional photographs to be taken. Work will not be permitted until the photographs have been accepted by the Engineer.
- B. All photographs shall be clearly labeled with the contract number, location, and date the photograph was taken. The film negatives shall be retained in the files of the photographer and turned over to the Owner at the completion of the work. All cost related to photographs shall be at the Contractor's expense.
- C. In addition, the Contractor shall furnish to the Engineer two copies of a color, VHS videotape recording, made in the presence of the Engineer, of all areas prior to construction. The videotape shall be made by a professional videographer and provide a complete and continuous record of existing conditions prior to the start of work. The videotape shall include an audio narrative detailing the date and locations being viewed. Construction shall not be permitted until the videotape has been accepted by the Engineer.
- D. Each videotape shall be labeled with the following:
  - 1. Contractor's name

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2. Contract number
3. Short description of view
4. Tape number and date made
5. Name of person making tape

END OF SECTION

SECTION 01080

ABBREVIATIONS AND DEFINITIONS

PART 1 – GENERAL

1.04 RELATED SECTIONS:

- A. Section 01090: Reference Standards

1.05 ABBREVIATIONS:

- A. Where any of the following abbreviations are used in the Contract Documents, they shall have the meaning set forth opposite each. Abbreviations for trade associations and standards organizations are listed in Section 01090 – Reference Standards.

AISC	American Institute of Steel Construction
ANS	American National Standard
ANSI	American National Standards Institute
ASTM	American Society of Testing and Materials
Fed. Spec.	Federal Specifications issued by the Federal Supply Service of the General Services Administration, Washington, D.C.
NPT	National Pipe Thread
Stl. WG	U.S. Steel Wire, Washburn and Moen, American Steel and Wire or Roebling Gage
USS Gage	United States Standard Gage

1.03 DEFINITIONS

- A. Wherever the words defined in this section or pronouns used in their stead occur in the Contract Documents, they shall have the meanings herein given.

**As Directed, as Required, Etc.**

Wherever in the Contract Documents, or on the Drawings, the words “as directed,” “as ordered,” “as requested,” “as required,” “as permitted,” or words of like import are used, it shall be understood that the direction, order, request, requirement, or permission of the Engineer is intended. Similarly, the words “approved,” “acceptable,” “suitable,” “satisfactory,” and words of like import shall mean approved by, acceptable to, suitable to, or satisfactory to the Engineer.

**Provide**

Wherever in the Contract Documents the work “provide” is used, it shall mean to furnish (or supply) and install.

END OF SECTION

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SECTION 01090

REFERENCE STANDARDS

PART 1 – GENERAL

1.06 QUALITY ASSURANCE

- A. Should specified reference standards conflict with the Contract Documents, refer to paragraph 3.02 of the General Conditions

1.07 SCHEDULE OF REFERENCES

AISC	American Institute of Steel Construction Eighth Floor 400 North Michigan Avenue Chicago, IL 60611
ANSI	American National Standards Institute 1430 Broadway New York, NY 10018
ASTM	American Society of Testing and Materials 1916 Race Street Philadelphia, PA 19103
FS	Federal Specification General Services Administration Specifications and Consumer Information Distribution Section (WRSIS) Washington Navy Yard, Building 197 Washington, DC 20407

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 – GENERAL

1.01 PRECONSTRUCTION CONFERENCE:

- A. In addition to the preconstruction conference required by Article 2.06 of the General Conditions, a preconstruction conference will be held between the Contractor, the Engineer, and the Owner to review the Contractor's proposed methods of complying with the requirements of the Contract Documents.
- B. Contractor will be notified of the time, date and place where the preconstruction conference will be held.

1.02 PROGRESS MEETINGS WITH ENGINEER:

- A. In addition to other regular project meetings for other purposes (as indicated elsewhere in the Contract Documents), hold general progress meetings once each month with times coordinated with preparation of payment requests. Meeting dates shall be established by the Engineer. Require every entity then involved in the planning, coordination or performance of work to be properly represented at each meeting. Include (when applicable) consultants, separate contractors (if any), principal subcontractors, suppliers/manufacturers/fabricators, governing authorities, insurers, special supervisory personnel and others with an interest or expertise in the progress of the work. Review each entity's present and future needs including interface requirements, time, sequence, deliveries, access, site utilization, temporary facilities and services, hours of work, hazards and risks, housekeeping, submittals, change orders, and documentation of information for payment requests. Discuss whether each element of current work is ahead of schedule. Determine how behind-time work will be expedited, and secure commitments from the entities involved in doing so. Discuss whether schedule revisions are required to ensure that current work and subsequent work will be completed within the Contract Time. Review everything of significance which could affect the progress of the work.
- B. Within seven days after each progress meeting date, the Engineer will forward copies of the minutes-of-the-meeting, to the Contractor.
- C. Immediately following each progress meeting where revisions to the Progress Schedule/Critical Path Schedule have been made or recognized (regardless of whether agreed to by each entity represented), revise the Schedule. Reissue revised Schedule within 10 days after meeting. At intervals matching the preparation of payment requests, revise and reissue the Schedule to show actual progress of the work in relation to the latest revision of the Schedule.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 – GENERAL

1.01 DESCRIPTION:

A. This Section specifies the general methods and requirements of submissions applicable to the following work-related submittals.

1. Shop Drawings.
2. Product Data.
3. Samples.
4. Mock Ups.
5. Construction Photographs.
6. Construction or Submittal Schedules.

B. Additional general submission requirements are contained in Paragraph 6.17 of the General Conditions.

C. Detailed submittal requirements will be specified in the technical specifications section.

1.02 SHOP DRAWINGS, PRODUCT DATA, SAMPLES:

A. Shop Drawings:

1. Shop drawings, as defined in the General Conditions, and as specified in individual work Sections include, but are not necessarily limited to: custom-prepared data such as fabrication and erection/installation (working) drawings of concrete reinforcement, structural details and piping layout, scheduled information, setting diagrams, actual shopwork manufacturing instructions, custom templates, special wiring diagrams, coordination drawings, individual system or equipment inspection and test reports including performance curves and certifications as applicable to the work.
2. All shop and working drawings shall be prepared on standard size, 24-in. by 36-in. sheets, except those which are made by changing existing standard shop or working drawings.
3. All shop drawings shall be submitted using the transmittal form furnished by the Engineer.
4. All shop drawings submitted by subcontractors for approval 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.

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5. The Contractor shall check all subcontractor's shop drawings regarding measurements, size of members, material, and details to satisfy himself that they conform to the intent of the Drawings and Specifications. Shop drawings found to be inaccurate or otherwise in error shall be returned to the subcontractors for correction before submission thereof.
6. All details on shop drawings submitted for approval shall show clearly the relation of the various parts of 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 for approval.

B. Product Data:

1. Product data as specified in individual Sections, include, but are not necessarily limited to, standard prepared data for manufactured products (sometimes referred to as catalog data), such as the manufacturer's product specification and printed installation instructions, availability of colors and patterns, manufacturer's printed statements of compliances including certificates of compliance 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 and recommended spare-parts listing, and printed product warranties, as applicable to the Work.

C. Samples:

1. Samples specified in individual Sections, include, but are not necessarily limited to, 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. The Contractor shall 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 the Specifications.
- 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

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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. Provide to the Engineer a copy of each submittal transmittal form for shop drawings, product data and samples at the time of submittal of said drawings, product data and samples to the Engineer.

- C. If a shop drawing shows any deviation from the requirements of the Contract Documents, the Contractor shall make specific mention of the deviations in the Transmittal Form furnished by the Engineer and provide a description of the deviations in a letter attached to the submittal.
- D. The review and approval of shop drawings, samples or product data by the Engineer shall not relieve the Contractor from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error and omission are assumed by the Contractor and the Engineer will not have responsibility therefore.
- 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. Manufacturer's printed installation instructions, a part of product data submitted to the Engineer will not be reviewed and are for informational purposes only.

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. All submittals shall be submitted sufficiently in advance of construction requirements to provide no less than ten days, including Saturdays, Sundays and legal holidays for review from the time received at the Engineer's reviewing office. For submittals of major equipment, that require more than ten days to review, due to its sheer complexity and amount of detail and also requiring review by more than one engineering discipline, a letter will be sent by the Project Manager or his/her designee to the Contractor informing him/her of the circumstances and the date it is expected the submittal will be returned to the Contractor.
- C. Number of submittals required:
  - 1. Shop Drawings: Unless otherwise stated in the respective Specifications Sections, submit six (6) copies.

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2. Product Data: Unless otherwise stated in the respective Specifications submit six (6) copies.
3. Samples: Submit the number stated in the respective Specification 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 specification 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 Specification numbers.
9. Identification of deviations from Contract Documents.
10. Identification of revisions on resubmittals.
11. An 8-in. X 3-in. blank space for Contractor and Engineer stamps.

- E. Each shipment of drawings shall be accompanied by a transmittal form furnished by the Engineer giving a list of the drawing numbers and the names mentioned above.

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

- A. The Engineer's review is for general conformance with the design concept and contract drawings. Markings or comments shall not be construed as relieving the Contractor from compliance with the contract plans and specifications or from departures therefrom. 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.

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- B. The review of shop drawings, data, and samples will be general. 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.
- C. If the shop drawings, data or samples as submitted describe variations and show a departure from the Contract requirements which the 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 time for performance, the Engineer may return the reviewed drawings without noting an exception.
- D. Two (maximum) copies of shop drawings or product data will be returned to the Contractor via First Class United States Postal Service. Samples will not be returned.
- E. Submittals will be returned to the Contractor under one of the action codes indicated and defined on the transmittal form furnished by the Engineer.
- F. Resubmittals will be handled in the same manner as first submittals. On resubmittals the Contractor shall direct specific attention, in writing, on the letter of transmittal and on resubmitted shop drawings by use of revision triangles or other similar methods, to revisions other than the corrections requested by the Engineer, on previous submissions. Any such revisions which are not clearly identified shall be made at the risk of the Contractor. The Contractor shall make corrections to any work done because of this type revision that is not in accordance to the Contract Documents as may be required by the Engineer.
- G. 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 "Rejected" until resubmitted. The Engineer may at his option provide a list or mark the submittal directing the Contractor to the areas that are incomplete.
- H. 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 seven working days prior to release for manufacture.
- I. 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 6.

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1.07 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 sections, of the Specifications, so that the installation will not be delayed by processing times including disapproval resubmittal (if required), coordination with other submittals, inspection, testing (off-site and on-site), 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.

1.08 CERTIFICATION FORMS:

- A. If specifically specified in other Sections of these Specifications, the Contractor shall submit the applicable certification form for each item required, and in the form attached to this Section, completely filled in and stamped.

1.09 CERTIFICATES OF COMPLIANCE:

- A. Certificates of Compliance specified in the specifications shall include and mean certificates, manufacturer's certificates, certifications, certified copies, letters of certification and certificate of materials.
- B. The Contractor shall be responsible for providing Certificates of Compliance requested and specified in the technical specifications. Certificates are required for demonstrating proof of compliance with specification requirements and shall be executed in 6 copies unless otherwise specified. Each certificate shall be signed by an official authorized to certify on behalf of the manufacturing company and shall contain the name and address of the Supplier, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Supplier from furnishing satisfactory material, if after tests are performed on selected samples, the material is found not to meet the specific requirements.

END OF SECTION

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CERTIFICATE OF DESIGN

The undersigned hereby certifies that he/she is a Professional Engineer registered in the state of \_\_\_\_\_ and that he/she has been employed by (Name of Contractor) \_\_\_\_\_ to design \_\_\_\_\_ in accordance with Specifications Section \_\_\_\_\_ for the Sewer and Manhole Replacement and Appurtenant Work in Amesbury, Massachusetts. The undersigned further certifies that he/she has performed similar designs previously and has performed the design of the \_\_\_\_\_; that said design is in conformance with all applicable local, state, and federal codes, rules, and regulations and professional practice standards; that his/her signature and Professional Engineer (P.E.) Stamp have been affixed to all calculations and drawings used in, and resulting from, the design; and that the use of that stamp signifies the responsibility of the undersigned for that design.

The undersigned hereby certifies that he/she has Professional Liability Insurance with limits of \$1,000,000.00 and a Certificate of Insurance is attached.

The undersigned hereby agrees to make all original design drawings and calculations available to the town of Amesbury or Owner's representative within seven (7) days following written request therefore by the Owner.

\_\_\_\_\_  
P.E. Name

\_\_\_\_\_  
Contractor's Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

SECTION 01310

CONSTRUCTION PROGRESS SCHEDULES

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. CONTRACTOR shall prepare and submit to ENGINEER for review within 15 days after Notice to Proceed, a construction progress schedule.
- B. No work shall be done between 3:30 p.m. and 7:00 a.m. nor on Saturdays, Sundays or legal holidays without written permission of OWNER. However, emergency work may be done without prior permission.
- C. Night work may be established by CONTRACTOR as regular procedure with written permission of OWNER. Such permission, however, may be revoked at any time by OWNER if CONTRACTOR fails to maintain adequate equipment and supervision for proper prosecution and control of work at night.

1.02 FORM OF SCHEDULES:

- A. Prepare schedules in form of a horizontal bar chart.
  - 1. Provide separate horizontal bar for each trade or operation.
  - 2. Horizontal Time Scale: Identify first work day of each week.
  - 3. Scale and spacing to allow space for notations and future revisions.
- B. Format of Listings: Chronological order of start of each item of work.
- C. Identification of Listings: By major specification section numbers.

1.03 CONTENT OF SCHEDULES:

- A. Construction Progress Schedule:
  - 1. Show complete sequence of construction by activity for building relocation, concrete slab and foundation removal, soils removal, relocated bikepath, backfill, loan and seed.  
  
Show dates for beginning and completion of each major element of construction.
  - 3. Show projected percentage of completion for each item as of first day of each month.

1.04 SCHEDULE REVISIONS:

- A. Every 30 days CONTRACTOR shall revise construction schedule to reflect changes in progress of work.

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- B. Indicate progress of each activity at date of submittal.
- C. Show changes occurring since previous submittal of schedule.
  - 1. Major changes in scope.
  - 2. Activities modified since previous submittal.
  - 3. Revised projections of progress and completion.
  - 4. Other identifiable changes.
- D. Provide a narrative report as needed to define:
  - 1. Problem areas, anticipated delays, and impact on schedule.
  - 2. Corrective action recommended and its effect.
  - 3. Effect of changes on schedules of other CONTRACTORS.

1.05 SUBMITTAL REQUIREMENTS:

- A. For initial submittal of construction schedule and subsequent revisions thereof, furnish six copies of schedule to ENGINEER.

END OF SECTION

SECTION 01400

QUALITY ASSURANCE

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. This section covers Quality Assurance and Control requirements for this contract.
- B. The Contractor is responsible for controlling the quality of work, including work of its subcontractors and suppliers, and for assuring the quality specified in the Technical Specifications is achieved.
- C. Refer to the Article 6 - Contractor's Responsibilities, paragraphs 6.01, 6.02, and 6.03 of the General Conditions, including Supplementary Conditions.

1.02 TESTING LABORATORY SERVICES:

- A. All tests which require the services of a laboratory to determine compliance with the Contract Documents, shall be performed by an independent commercial testing laboratory acceptable to the Engineer. The laboratory shall be staffed with experienced technicians, properly equipped, and fully qualified to perform the tests in accordance with the specified standards.
- B. Preliminary Testing Services: Unless otherwise specified, the Contractor shall be responsible for all testing laboratory services in connection with concrete materials and mix designs, the design of asphalt mixtures, gradation tests for structural and embankment fills, backfill materials, and all other tests and engineering data required for the Engineer's review of materials and equipment proposed to be used in the Work. The Contractor shall obtain the Engineer's acceptance of the testing laboratory before having services performed, and shall pay all costs for services.
- C. Quality Control Testing Services: Perform all quality control tests in the field or in the laboratory on concrete, asphalt mixtures, moisture-density (Proctor) and gradation tests on structural and embankment fills, and backfill materials, in-place field density tests on structural and embankment fills, and other materials and equipment, during and after their incorporation in the Work. Field sampling and testing shall be performed in the general manner indicated in the specifications, with minimum interference with construction operations. The Engineer shall determine the exact time and location of field sampling and testing, and may require such additional sampling and testing as necessary to determine that materials and equipment conform with data previously furnished by Contractor and with the Contract Documents.
- D. Arrangements for delivery of samples and test specimens to the testing laboratory will be made by the Contractor. The laboratory tests shall be performed within a reasonable time consistent with the specified standards. Furnish a written report of each test to the Engineer.
- E. Contractor shall furnish all sample materials and cooperate in the sampling and field testing activities, interrupting the Work when necessary. When sampling or testing

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activities are performed in the field, the Contractor shall furnish personnel and facilities to assist in the activities.

- F. The Contractor shall not retain any testing laboratory against which the Owner or the Engineer have reasonable objection, and if at any time during the construction process the services become unacceptable to the Owner, or the Engineer, either the Owner or the Engineer may direct in writing that such services be terminated. The request must be supported with evidence of improper testing or unreasonable delay. If the Engineer determines that sufficient cause exists, the Contractor shall terminate the services and engage a different testing laboratory.
- G. Transmittal of Test Reports: Written reports of testing and engineering data furnished by the Contractor for the Engineer's review of materials and equipment proposed to be used in the Work shall be submitted as specified for Shop Drawings.
- H. The testing laboratory shall furnish four copies of a written report of each test performed by laboratory personnel in the field or laboratory to the Contractor. Distribution shall be two copies of each test report to the Engineer's Representative, one copy to the Owner, and one copy for the Contractor within three days after each test is completed.

1.03 QUALITY ASSURANCE:

- A. Codes and Standards: Refer to Article 3 - Contract Documents: Intent, Amending, Reuse, paragraph 3.02 of the General Conditions.
- B. Copies of applicable referenced standards are not included in the Contract Documents. Where copies of standards are needed by the Contractor for superintendence and quality control of the work, the Contractor shall obtain a copy or copies directly from the publication source and maintain at the jobsite, available to the Contractor's personnel, subcontractors, and Engineer.
- C. Quality of Materials: Unless otherwise specified, all materials and equipment furnished for permanent installation in the Work shall conform to applicable standards and specifications and shall be new, unused, and free from defects and imperfections, when installed or otherwise incorporated in the Work. Material and equipment shall not be used by the Contractor for any purpose other than that intended or specified unless such use is authorized by the Engineer.
- D. Where so specified, products or workmanship shall also conform to the additional performance requirements included within the Contract Documents to establish a higher or more stringent standard or quality than that required by the referenced standard.

1.04 OFFSITE INSPECTION:

- A. When the specifications require inspection of materials or equipment during the production, manufacturing, or fabricating process, or before shipment, such services shall be performed by an independent testing laboratory, or inspection organization acceptable to Engineer in conjunction with or by the Engineer.

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- B. The Contractor shall give appropriate written notice to the Engineer not less than 30 days before offsite inspection services are required, and shall provide for the producer, manufacturer, or fabricator to furnish safe access and proper facilities and to cooperate with inspecting personnel in the performance of their duties.
- C. The inspection organization shall submit a written report to the Contractor who shall provide copies to the Engineer.

1.05 MATERIALS AND EQUIPMENT:

- A. The Contractor shall maintain control over procurement sources to ensure that materials and equipment conform to specified requirements in the Contract Documents.
- B. The Contractor shall comply with manufacturer's printed instructions regarding all facets of materials and/or equipment movement, storage, installation, testing, startup, and operation. Should circumstances occur where the contract documents are more stringent than the manufacturer's printed instructions, the Contractor shall comply with the specifications. In cases where the manufacturer's printed instructions are more stringent than the contract documents, the Contractor shall advise the Engineer of the disparity and conform to the manufacturer's printed instructions. In either case, the Contractor is to apply the more stringent specification or recommendation, unless approved otherwise by the Engineer.

1.06 SHOP AND FIELD TESTING:

- A. The Contractor is also responsible for providing the shop and field testing specified in the technical specification sections.
- B. The Contractor and its Subcontractor shall perform inspections, tests, and other services as required by the Contract Documents.
- C. Contractor shall provide twenty one days notice to the Engineer so that the Engineer may witness Contractor and/or Subcontractors offsite and on site tests. The Engineer's witnessing of tests does not relieve the Contractor and/or Subcontractors of their obligation to comply with the requirements of the Contract Documents.

1.07 MANUFACTURER'S FIELD SERVICES:

- A. When specified in the technical specifications sections, the Contractor shall arrange for and provide technical representation from manufacturer's of respective equipment, items or components. The manufacturer's representative shall be a factory trained service engineer/technician with the type and length of experience specified in the technical specifications.

1.08 CERTIFICATION FORMS AND CERTIFICATES:

- A. The Contractor shall be responsible for submitting the certification forms and certificates in conformance with the requirements specified in Section 01300 - Submittals.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 QUALITY CONTROL:

- A. Quality control is the responsibility of the Contractor, and the Contractor shall maintain control over construction and installation processes to assure compliance with specified requirements.
- B. Certifications for personnel, procedures, and equipment associated with special processes (e.g., welding, cable splicing, instrument calibration, surveying) shall be maintained in the Contractor's field office, available for inspection by the Engineer. Copies will be made available to the Engineer upon request.
- C. Means and methods of construction and installation processes are the responsibility of the Contractor, and at no time is it the intent of the Engineer to supersede or void that responsibility.

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. The Contractor shall provide all temporary facilities for the proper completion of the work, as required and as specified.

1.02 SANITARY REGULATIONS:

- A. The Contractor shall provide adequate sanitary facilities for the use of those employed on the Work. Such facilities shall be made available when the first employees arrive on the site of the Work, shall be properly secluded from public observation, and shall be constructed and maintained during the progress of the Work in suitable numbers and at such points and in such manner as may be required.
- B. The Contractor shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the Work, on the lands of the Owner, or on adjacent property.

1.03 WATER SUPPLY:

- A. For all necessary operations at the site of the work (except as noted in the next paragraph below) the Owner, without charge therefore, shall provide reasonable quantities of water at the then existing pressure from a mutually convenient hydrant of the water distribution system. The Contractor shall furnish all necessary pipe or hose extensions to conduct the water to the points of use and shall exercise due care not to waste water. The Contractor shall not contaminate the water supply and shall comply with all applicable regulations and code requirements.
- B. The Owner reserves the right to limit, suspend, or terminate the supplying of water as set forth above should it consider such action to be necessary on account of damage to the distribution system, the necessity of conserving water, or other emergency. In this event, the Contractor shall obtain water from some other approved source, at his own expense.

1.04 TEMPORARY HEAT:

- A. If temporary heat is required for the protection of the Work, the Contractor shall provide and install suitable heating apparatus, shall provide adequate and proper fuel, and shall maintain heat as required.

1.05 ELECTRICAL ENERGY:

- A. The Contractor shall make all necessary applications and arrangements and pay all fees and charges for electrical energy for power and light necessary for the proper completion of the Work and during its entire progress. The Contractor shall provide and pay for all temporary wiring, switches, connections, and meters.

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1.06 PRECAUTIONS DURING ADVERSE WEATHER:

- A. During adverse weather and against the possibility thereof, the Contractor shall take all necessary precautions so that the Work may be properly done and satisfactory in all respects. When required, protection shall be provided by use of tarpaulins, wood and building-paper shelters, or other suitable means.

1.07 CONTRACTOR'S FIELD OFFICE:

- A. The Contractor shall maintain a temporary field office near the work for his own use during the period of construction at which readily accessible copies of all contract documents shall be kept. The office shall be located where it will not interfere with the progress of the work. In charge of this office there shall be a competent superintendent of the Contractor as specified under "Supervision of Work" in the AGREEMENT.

1.08 OFFICE FOR ENGINEER:

- A. Promptly after starting work at the site, the Contractor shall provide an office space for the exclusive use of the Engineer, and the Contractor shall maintain this office space thereafter until the completion of the work to be done under this contract. A key to the office shall be furnished to the Engineer.
- B. The office, furniture, equipment, supplies, and services necessary shall be satisfactory to the Engineer.
- C. The Contractor shall furnish the following furniture, equipment, supplies, and services:
  - 1. One plan table or sloping plan shelf, about 3 ft. by 6 ft., with a reasonably smooth top, and one suitable swivel stool.
  - 2. Two additional chairs.
  - 3. One desk for general office use about 3 ft. by 5 ft. with a desk chair of the armchair swivel type.
  - 4. Two-drawer, legal size, metal filing cabinet with lock. The Contractor shall furnish up to two additional filing cabinets if so requested by the Engineer.
  - 5. Telephone extension and answering machine on desk with touch-tone telephone with internal electronic that allows the telephone to be used on both touch-tone and digital pulse services. Telephone to be AT&T or equal. Provide touch-tone service where available. The Contractor shall pay all charges for calls.

END OF SECTION

SECTION 01568

EROSION CONTROL, SEDIMENTATION AND  
CONTAINMENT OF CONSTRUCTION MATERIALS

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. Provide all work and take all measures necessary to control soil erosion resulting from construction operations, prevent flow of sediment from construction site, and contain construction materials (including excavation and backfill) within protected working area as to prevent damage to any stream or wetlands.

1.02 REFERENCE:

- A. "Guidelines for Erosion and Sediment Control, Planning and Implementation" and "Processes, Procedures and Methods to Control Pollution Resulting from all Construction Activity", published by the United States Environmental Protection Agency.
- B. Details of standard preventive methods for soil erosion and sediment control.

1.03 SUBMITTALS:

- A. Two weeks prior to the start of the work, submit to Engineer, for review, a plan with detailed sketches showing the proposed methods to be used for controlling erosion during construction.
- B. Prior to commencing any work that will require dewatering of excavations, the Contractor shall obtain coverage under the EPA NPDES permit program for construction dewatering. The Contractor shall submit a construction site dewatering form to the US EPA Region 1 and the Massachusetts DEP. Copies of the form are attached in Appendix B. No dewatering shall be undertaken until the permit coverage is obtained. All dewatering operations must be conducted in compliance with EPA and DEP requirements.

1.04 QUALITY ASSURANCE:

- A. Use acceptable procedures, including use of water diversion structures, diversion ditches, settling basins, and sediment traps.
- B. Operations restricted to areas of work indicated on drawings and area which must be entered for construction of temporary or permanent facilities.
- C. If construction materials are washed away during construction, remove materials from fouled areas.
- D. Stabilize diversion outlets by means acceptable to Engineer.

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- E. Engineer has authority to limit surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations and to direct immediate permanent or temporary pollution control measures to prevent contamination of any stream or wetlands, including construction of temporary berms, dikes, dams, sediment basins, sediment traps, slope drains, and use of temporary mulches, mats, or other control devices or methods as necessary to control erosion.

PART 2 – PRODUCTS

2.01 EROSION CONTROL – SILT SOCK:

- A. A silt sock shall be installed for erosion control per approved plan. The silt sock shall be comprised of a fabric exterior filled with wood chips or compost. The material used in the sock shall be environmentally safe material.
- B. The silt sock shall be installed on the top of the ground along the down-slope areas and along side-slope areas as required to prevent or reduce erosion per the approved plan. The silt sock shall be lapped or butted at the ends to create a continuous barrier. Staking the sock may not be required in all areas. However; staking the sock in greater sloped areas may be necessary. Contractor shall consult with the Amesbury Conservation Commission Agent to determine areas requiring staking and for approval of installation of erosion control.

2.02 WOOD STAKES:

- A. 2 in. by 2 in. by 3 ft.

2.03 SYNTHETIC FILTER FABRIC:

- A. Synthetic filter fabric to be a pervious sheet of propylene, nylon, polyester or ethylene filaments and shall be certified by the manufacturer or supplier as conforming to the following requirements:

<u>Physical Property</u>	<u>Requirements</u>
Filtering Efficiency	75% (min.)
Tensile Strength at 20% (max.) Elongation	Extra Strength - 50 lbs./lin. in. (min.) Standard Strength – 30 lbs./lin. in. (min.)
Flow Rate	0.3 gal./sq. ft./min. (min.)

- B. Burlap to be 10 ounce per square yard fabric.
- C. Posts for filter fences either 2 x 3 or 2 x 4 inch studs or 0.5 pounds (minimum) per linear foot steel with a minimum length of 5 feet. Steel posts to have projections for fastening wire to them.

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- D. Stakes for filter fences to be 2" x 2" wood or equivalent metal with a minimum length of 3 feet.
- E. Wire fence reinforcement for silt fences using standard strength filter cloth to be a minimum of 42 inches in height, a minimum of 14 gauge and have a maximum mesh spacing of 6 inches. Use where required per manufacturer's instructions.

2.04 SEDIMENTATION BASIN:

- A. Sedimentation basins shall be sized to collect silt laden water during dewatering from construction site into an enclosed baffled-basin system. The basin shall be sized to accommodate and effectively remove solids from the maximum volume of dewatering effluent anticipated with a resulting effluent stream free of silt and other suspended solids.

PART 3 – EXECUTION

3.01 GENERAL:

- A. Soil and sedimentation control measures installed over the length of the project in areas located within wetland resource areas or within 100 feet of the buffer zone of these areas. Both hay bales and filter fences installed at wetland areas and within 100 feet of buffer zones. Sediment and erosion control measures installed along the work area prior to excavation of trench sections. The location of the proposed control measures should be as directed in the field or as shown on the plans.

3.02 INSTALLATION:

- A. Straw/Hay Bales:
  - 1. Sheet flow applications:
    - a. Bales placed in a single row, lengthwise on the contour, with ends of adjacent bales tightly abutting one another.
    - b. All bales either wire-bound or string-tied. Bales installed so that bindings are oriented around the sides rather than along the tops and bottoms of the bales to prevent deterioration of the bindings.
    - c. The barrier to be entrenched and backfilled. Excavate trench the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. After the bales are staked and chinked, backfill against the barrier with excavated soil. Backfill soil to conform to the ground level on the downhill side and be built up to 4 inches against the uphill side of the barrier. Bales placed 10 feet away from toe of slope.
    - d. Each bale securely anchored by at least two stakes or rebars driven through the bale. The first stake in each bale driven toward the previously laid bale to force the bales together. Stakes or re-bars driven deep enough into the ground to securely anchor the bales.

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- e. The gaps between bales to be chinked (filled by wedging) with straw to prevent water from escaping between the bales. Loose straw to be scattered over the area immediately uphill from a straw bale barrier to increase barrier efficiency. In sloping areas where surface flow follows the bale line, perpendicular bale checks installed at appropriate intervals (100 feet maximum).
  - f. Inspect barriers frequently and repair or replacement made promptly as needed.
  - g. Bale barriers removed when they have served their usefulness, but not before the upslope areas have been permanently stabilized.
2. Channel Flow Applications:
- a. Bales placed in a single row, lengthwise, oriented perpendicular to the contour, with ends of adjacent bales tightly abutting one another.
  - b. The remaining steps for installing a bale barrier for sheet flow applications apply here, with the following addition:
    - (1) The barrier extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale to assure that sediment laden runoff will flow either through or over the barrier but not around it.
3. Catch basin Application:
- a. Bales shall be placed in a square or rectangular shape around depressed catch basin inlets. Catch basins constructed on sloping areas not encircled by bales.
  - b. The remaining steps for installing a bale barrier for sheet flow applications apply.
4. Maintenance:
- a. Inspect barrier after each storm event and repair or replacement made promptly as needed or as directed by the Engineer.
  - b. Cleanout of accumulated sediment behind the bales if 1/4 of the original height of the bales becomes filled in with sediment.
- B. Filter or Silt Fences:
- 1. Sediment barrier constructed of burlap or standard strength or extra strength synthetic filter fabrics in areas where only sheet or overland flows are expected. In special cases burlap to be used in drainageways as directed by the Engineer.
    - a. The height of the barrier not to exceed 36 inches. Filter fence located 10 feet away from the toe of slope.

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- b. When joints are necessary, filter cloth spliced together only at a support post, with a minimum 6-inch overlap, and securely sealed. See manufacturer's recommendations.
  - c. Posts spaced a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 12 inches). When extra strength fabric is used without the wire support fence, post spacing as manufacturer recommends.
  - d. Excavate trench approximately 4 inches wide and 4 inches deep along the line of posts and upslope from the barrier in accordance with manufacturer's recommendations.
  - e. When standard strength filter fabric is used, fasten a wire mesh support fence securely to the upslope side of the posts using heavy duty wire staples at least 1 inch long, tie wires or hog rings. Extend the wire into the trench a minimum of 2 inches and not more than 36 inches above the original ground surface.
  - f. The standard strength filter fabric to be stapled, wired or tied to the wire fence, and extend 8 inches of the fabric into the trench. Extend the fabric not more than 36 inches above the original ground surface. Do not staple filter fabric to existing trees.
  - g. Eliminate the wire mesh support fence when extra strength filter fabric or burlap and closer post spacing are used. In such a case, the filter fabric is stapled, wired, or tied directly to the posts with all other provisions of item f. applied.
  - h. Backfill the trench and the soil compacted over the filter fabric.
  - i. Remove filter barriers when they have served their useful purpose, but not before the upslope area has been permanently stabilized.
2. Maintenance:
- a. Inspect filter barriers immediately after each rainfall and at least daily during prolonged rainfall. Perform any required repairs immediately.
  - b. Should the fabric decompose or become ineffective prior to the end of the expected usable life and the barrier still be necessary, replace fabric promptly.
  - c. Remove sediment deposits when they reach approximately one-half the height of the barrier.
  - d. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required to be dressed to conform to the existing grade, prepared and seeded.

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3. Emergency provisions:
  - a. Effective monitoring implemented to check the sedimentation and erosion controls.
  - b. Monitoring includes availability during non-working hours.

C. Sedimentation Basin:

1. Install sedimentation basins where necessary or as directed by the Engineer to reduce the amount of suspended solids from effluent discharged by construction operations. Accumulated sediment and silt shall be removed from the basins by the Contractor as needed to ensure efficiency. Removed material shall be legally disposed of in a location determined by Contractor to be acceptable to City or Engineer.

D. Additional Requirements:

1. Construct earth berms or diversions to intercept and divert runoff water from critical areas.
2. Discharge silt-laden water from excavations onto filter fabric mat, baled hay or straw sediment traps, or into sedimentation basins to ensure that only sediment-free water is returned to watercourses.
3. Do not place excavated soil material adjacent to watercourse in manner that will cause it to wash away by high water or runoff.
4. Prevent damage to vegetation by excessive watering or silt accumulation in the discharge area.
5. Do not dump spoiled material into any streams, wetlands, surface waters, or unspecified locations.
6. Prevent indiscriminate, arbitrary, or capricious operation of equipment in streams, wetlands or surface waters.
7. Do not pump silt-laden water from trenches or excavations into surface waters, streams, wetlands, or natural or man-made channels leading thereto.
8. Prevent damage to vegetation adjacent to or outside of construction area limits.
9. Do not dispose of trees, brush, debris, paints, chemicals, asphalt products, concrete curing compounds, fuels, lubricants, insecticides, wash water from concrete trucks or hydro-seeders, or any other pollutant in streams, wetlands, surface waters, or natural or man-made channels leading thereto, or unspecified locations.
10. Do not alter flow line of any stream unless indicated or specified.

END OF SECTION

SECTION 01600

CONTROL OF MATERIALS

PART 1 - GENERAL

1.01 APPROVAL OF MATERIAL:

- A. Unless otherwise specified, only new materials and equipment shall be incorporated in the work. All materials and equipment furnished by the Contractor shall be subject to the inspection and approval of the Engineer. No material shall be delivered to the work without prior approval of the Engineer.
- B. As specified in Section 01300, the Contractor shall submit to the Engineer, data relating to materials and equipment he proposes to furnish for the work. Such data shall be in sufficient detail to enable the Engineer to identify the particular product and to form an opinion as to its conformity to the specifications.
- C. Facilities and labor for handling and inspection of all materials and equipment shall be furnished by the Contractor. If the Engineer requires, either prior to beginning or during the progress of the work, the Contractor shall submit additional samples or materials for such special tests as may be necessary to demonstrate that they conform to the specifications. Such samples shall be furnished, stored, packed, and shipped as directed, at the Contractor's expense. Except as otherwise noted, the Owner will make arrangements for and pay for the tests.
- D. Any delay of approval resulting from the Contractor's failure to submit samples or data promptly shall not be used as a basis of a claim against the Owner or the Engineer.
- E. In order to demonstrate the proficiency of workmen or to facilitate the choice among several textures, types, finishes, and surfaces, the Contractor shall provide such samples of workmanship or finish as may be required.
- F. The materials and equipment used on the work shall correspond to the approved samples or other data.

END OF SECTION

SECTION 01610

DELIVERY, STORAGE AND HANDLING

PART 1 - GENERAL

1.01 GENERAL:

- 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.

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. 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 surface 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. Precast concrete shall be handled and stored in a manner to prevent accumulations of dirt, standing water, staining, chipping or cracking. Block and

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masonry products shall be handled and stored in manner to reduce breakage, cracking and spalling.

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
  - 1. Closeout procedures.
  - 2. Final cleaning.
  - 3. Adjusting.

1.02 RELATED WORK:

- A. Warranties and Bonds are included in Section 01740.

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's inspection.
- 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 payment, and sum remaining due.

1.04 FINAL CLEANING:

- A. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.
  - 1. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.

END OF SECTION

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SECTION 01710

CLEANING UP

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

- A. During its progress, the work and the adjacent areas affected thereby shall be cleaned up and all rubbish, surplus materials, and unneeded construction equipment shall be removed and all damage repaired so that the public and property owners will be inconvenienced as little as possible.
- B. Where material or debris has washed or flowed into or been placed in existing watercourses, ditches, gutters, drains, pipes structures, work done under this contract, or elsewhere during the course of the Contractor's operations, such material or debris shall be entirely removed and satisfactorily disposed of during the progress of the work, and the ditches, channels, drains, pipes, structures, and work, etc., shall, upon completion of the work, be left in a clean and neat condition.
- C. On or before the completion of the work, the Contractor shall, unless otherwise especially directed or permitted in writing, tear down and remove all temporary buildings and structures built by him; shall remove all temporary works, tools, and machinery or other construction equipment furnished by him; shall remove, acceptably disinfect, and cover all organic matter and material containing organic matter in, under, and around privies, houses, and other buildings used by him; shall remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operations in a neat and satisfactory condition.
- D. The Contractor shall restore or replace, when and as directed, any public or private property damaged by his work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end, the Contractor shall do as required all necessary highway or driveway, walk, and landscaping work. Suitable materials, equipment, and methods shall be used for such restoration. The restoration of existing property or structures shall be done as promptly as practicable as work progresses and shall not be left until the end of the contract period.

END OF SECTION

SECTION 01740

WARRANTIES AND BONDS

PART 1 – GENERAL

1.01 SCOPE OF WORK:

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers standard warranties on products and special warranties.

1.02 RELATED WORK:

- A. Refer to Conditions of Contract for the general requirements relating to warranties and bonds.
- B. General closeout requirements are included in Section 01700 Project Closeout.
- C. Specific requirements for warranties for the Work and products and installations that are specified to be warranted, are included in the individual Sections of Divisions 2 and 3.
- D. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.

1.03 SUBMITTALS:

- A. Submit written warranties to the Owner prior to the date fixed by the Engineer for Substantial Completion. If the Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Owner.
- B. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Owner within fifteen days of completion of that designated portion of the Work.
- C. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Engineer for approval prior to final execution.
- D. Refer to individual Sections of Divisions 2 and 3 for specific content requirements, and particular requirements for submittal of special warranties.
- E. At Final Completion, compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence.

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- F. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-in. by 11-in. paper.
- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification Section in which specified, and the name of the product or work item.
- H. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer, supplier, and manufacturer.
- I. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS," the Project title or name, and the name, address, and telephone numbers of the Contractor and equipment supplier.
- J. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

1.04 WARRANTY REQUIREMENT:

- A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights or remedies.
- E. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- F. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

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- G. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.05 DEFINITIONS:

- A. Standard Product Warranties are pre-printed written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
- B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

END OF SECTION