



**TOWN OF ORLEANS  
PURCHASE ORDER  
\$ 25,000 AND GREATER**

THIS ORDER NUMBER MUST  
APPEAR ON ALL INVOICES,  
PACKING LISTS, AND PGKS.

ORDER  
NUMBER

**3788**

POURZM< O H S O Z O - H O C R H S Z -

1. INVOICE MUST BE SENT IN DUPLICATE AND MUST INCLUDE VENDOR'S S.S. OR F.I.D. NO.
2. ORDER NUMBER MUST APPEAR ON INVOICE.
3. OUR TAX EXEMPT NO. E 046 001 258.
4. ISSUE A BILL FOR EACH P.O. SEPERATELY.
5. INVOICES MUST SHOW NUMBER OF UNITS AND UNIT PRICE FOR EACH ITEM.
6. SHIP ALL GOODS PREPAD UNLESS OTHERWISE DIRECTED.
7. THIS P.O. EXPIRES 10 DAYS AFTER REQUIRED DELIVERY DATE.
8. TOWN OF ORLEANS WILL NOT BE LIABLE FOR ANY GOODS RECEIVED WITHOUT AN AUTHORIZED PURCHASE ORDER.

SHIP  
PREPAID  
TO



AECOM  
9 JOnathan Bourne Drive  
Pocasset, MA 02559

TO:

DATE OF ORDER 8/2/16	VENDOR 119	DEPARTMENT Planning	REQUIRED DELIVERY DATE 12/30/2016	ACCOUNT TO BE CHARGED 35 175 067 - 589130
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I CERTIFY THAT THIS PURCHASE ORDER COMPLIES FULLY WITH THE TOWN OF ORLEANS PURCHASING PROCEDURES AND CORRESPONDING STATE STATUTES THAT ADEQUATE FUNDS EXIST FOR THIS PURCHASE.

DEPT. HEAD  
SIGNATURE *[Signature]*

ITEM NO.	QUANTITY	UNIT	CATALOG NO.	DESCRIPTION	UNIT PRICE	REC'D	AMOUNT
				Water quality and Wastewater planning services, in accordance with Exhibit C, Change Order Form, attached.			\$ 571,560.00

**THIS PURCHASE IS NOT VALID UNLESS SIGNED  
BY TOWN ADMINSTRATOR AND FINANCE  
DIRECTOR.**

*[Signature]*  
\_\_\_\_\_  
DIRECTOR OF FINANCE

*[Signature]*  
\_\_\_\_\_  
TOWN ADMINISTRATOR

*8/4/16*  
\_\_\_\_\_  
DATE

*8/5/16*  
\_\_\_\_\_  
DATE



**EXHIBIT C**

**CHANGE ORDER FORM**

In accordance with the Purchase Order, dated October 20, 2015, and the Design Engineering Services Agreement dated October 15, 2015, between Town of Orleans, Massachusetts ("Client"), and AECOM Technical Services, Inc. a California corporation, ("AECOM"), this Change Order, with an effective date of \_\_\_\_\_, 2016, modifies that Agreement as follows:

**1. Changes to the Services:**

- 1.1 Attachment 1 – Scope of Services, EXHIBIT A – SERVICES, Task 1. Facilities Engineering, paragraph d. Cost Estimating:

Complete the following scope of work and deliverable as part of the FY17 Interim Planning and Implementation phase:

- Technical Memorandum on Updated Capital and O&M Cost Estimates.

- 1.2 Attachment 1 – Scope of Services, EXHIBIT A – SERVICES, Task 3. Demonstration Project Design and Implementation, paragraph b. Aquaculture/Shellfish Propagation:

Complete the following scope of work and deliverables as part of the FY16 Water Quality and Wastewater Planning:

- Aquaculture/Shellfish Propagation: Plan, design and coordinate the installation of an aquaculture/shellfish demonstration project on Lonnie's Pond in June 2016.

- 1.3 Attachment 1 – Scope of Services, EXHIBIT A – SERVICES, Task 6. Regulatory Review and Coordination, paragraph a. through c. inclusive:

Complete the following scope of work and deliverables as part of the FY17 Interim Planning and Implementation phase:

- Cape Cod Commission - Technical Memorandum Summarizing Compliance Requirements to meet Cape Cod Commission Approval;
- MassDEP - Technical Memorandum Summarizing MassDEP Compliance Requirements (Demonstration projects, potential treatment, disposal or reuse);
- Technical Memorandum Summarizing Meeting with MassDEP on status of Rock Harbor Creek WQ and potential UAA;
- Technical Memorandum Summarizing MassDEP and CCC Comments on the Draft CWMP; and
- Technical Memorandum on Compliance Requirements of the various agencies.

- 1.4 Attachment 1 – Scope of Services, EXHIBIT A – SERVICES, Task 7. Preparation of the Amendment CWMP, paragraph b.:

Complete the following scope of work and deliverables as part of the post FY17 Interim Planning and Implementation phase:

- Preparation of Final Amended Comprehensive Wastewater Management Plan with Relevant Appendices.

- 1.5 Attachment 1 – Scope of Services, EXHIBIT A – SERVICES, Page 14, add the following new Articles:

**“8. FY 17 Interim Planning and Implementation**

**8.1 Continued Planning and Engineering**

**8.1.1 Preplanning - Treatment and Disposal Site Investigations**

- Investigate the treated wastewater effluent flow paths from Parcel 1/1A with regards to Namskaket and Little Namskaket Marshes.
- Perform an environmental screening and update of issues related to use of Parcels 1/1A.
- Perform preliminary evaluations of up to six potential groundwater effluent disposal sites for the Downtown Area and develop scope of work and associate costs to perform detailed investigations that is required to obtain MassDEP approval as effluent disposal locations.
- Review and Update the Pleasant Bay Alliance – Composite Wastewater Management Analysis with regards to the Town of Orleans, MA. Prepare for and attend one workshop.
- Prepare a Composite Wastewater Management Analysis for Nauset Harbor and Rock Harbor Creek in the Town of Orleans, MA. Prepare for and attend one workshop.

**8.1.2 NT Technologies-Demonstration Project Pre-planning and Design and Implementation**

- Floating Constructed Wetlands: No further work is planned on floating constructed wetlands at this time. This work has been replaced by nitrogen removing biofilters.
- Nitrogen Removing Biofilters: Identify and evaluate the feasibility of individual on-site nitrogen removing biofilters as an alternative to Floating Constructed Wetlands for nitrogen removal. Consolidate existing research, coordinate with the Barnstable County Health Department, and develop a scope of work and associate cost to plan, design and implement up to four individual on-site nitrogen removing biofilters demonstration projects.

- Aquaculture/Shellfish Propagation: (a) Develop work plan, including baseline monitoring, and conduct viability study to optimize tray size, planting density and installation logistics for in Quanset Pond; (b) Plan population survey of quahog production on Town Cove as first step in demonstration project design; and (c) Consult with existing growers to remove constraints and expand and optimize production from existing grants.
- Permeable Reactive Barriers: (a) Plan, design and install a PRB Demonstration Project at Eldredge Park which allows monitoring this year of N removal effectiveness; and (b) Prepare a scope of work and preliminary project cost estimate for a PRB demonstration project addressing nitrogen and 1,4-Dioxane at the Landfill to allow for installation next fiscal year and subsequent near term benefit to Town Cove water quality.

#### **8.1.3 Design-WWTF, Collection System, Effluent Disposal System, Effluent Disposal and NT Technologies**

- Conduct a Public-Private Partnership risk analysis, including DB and DBO procurement, for the proposed Downtown Area wastewater system focused on issues of concern to the Town prior to making commitment to any private developer (issues include ownership of land and/or facilities; responsibilities and risk in event of default of developer or inability of developer to produce effluent meeting regulatory standards, etc.).
- Provide engineering and technical support for the evaluation; coordinate with the Town's legal consultant; and participate in up to four meetings/workshops related to the potential P3 alternatives for the proposed Downtown Area wastewater system.

#### **8.1.4 Regulatory Coordination**

- Perform a preliminary identification of project elements requiring permitting with MassDEP, CCC, MEPA and NHESP for the three non-traditional technologies: Nitrogen Removing Biofilters; Aquaculture/Shellfish Propagation; and Permeable Reactive Barriers. The basis of the Technical Memorandum will be the previously developed work plans which identified the preliminary location for the full scale non-traditional technologies and will include permit requirements, schedule, and an estimate of cost to complete the permit applications/submittal.

### **8.2 Adaptive Management Implementation**

#### **8.2.1 Water Quality Monitoring MEP Compliance**

- Review and comment on the SMAST review of Pleasant Bay water quality evaluation.
- Ongoing coordination with SMAST on monitoring installation of the demonstration projects and coordinate on other local WQ monitoring programs.

### 8.2.2 Water Quality Monitoring Project Baseline

- Review and comment on the SMAST limited monitoring program to collect baseline data and initial operational data for Lonnie's Pond demonstration project.

### 8.3 Program Management

#### 8.3.1 Public Engagement Coordination

- Prepare for and attend up to seven subcommittee workshops for the three non-traditional technologies: Nitrogen Removing Biofilters (1 workshop); Aquaculture/Shellfish Propagation (4 workshops); and Permeable Reactive Barriers (2 workshops).
- Prepare for and attend five OWQAP Meetings to keep members apprised of overall status of the Project.
- Prepare for and attend three Other Public Meetings.
- Prepare three brief status reports that incorporate/discuss the status of the three non-traditional technologies demonstration projects (Nitrogen Removing Biofilters; Aquaculture/Shellfish Propagation; and Permeable Reactive Barriers).

#### 8.3.2 Financial Modeling Analysis

- Develop water usage and associated potential cost estimates for residential and non-residential users in the downtown area, for the planning horizon scenario.
- Develop a "Best Case" project cost estimate and rerun the financial model and meet with the Board of Selectmen to review the results.
- Develop up to two additional scenarios involving P3 with model refinements; refine the model as necessary, and meet with the Board of Selectmen and Finance Committee to review the model runs based on results of P3 development and identified state and federal funding considerations.
- Prepare a cost comparison of maintaining on-site disposal systems vs. traditional and non-traditional Project components for the properties located in the Downtown Area.

### 9.0 Compost Shelter Demolition

9.1 General - ENGINEER shall perform the following Design and Demolition Phase Services, and Resident Services During Demolition of the Compost Shelter to which this Agreement applies, as hereinafter provided:

- Design Phase Services - ENGINEER shall provide Design Phase Basic Services as described in SECTION 9.2, paragraphs 9.2.1 through 9.2.3, inclusive. The services called for will be completed within 120 calendar days (excluding agency/committee review and approval) after written authorization to proceed from OWNER.

- Demolition Phase Services - ENGINEER shall provide Demolition Phase Basic Services as described in SECTION 9.3, paragraphs 9.3.1 through 9.3.17, inclusive. The services called for in Section 9.3 will be completed within a time to be determined at the end of the Design Phase (Design Phase Basic Services and Design Phase Additional Services) and after approval of the demolition design have been obtained and written authorization to proceed from OWNER.
- Resident Services – TBD

## 9.2 Design Phase

- 9.2.1 In consultation with OWNER prepare Contract Documents that will be incorporated into the Tri-Town Septage Treatment Facility Demolition Contract Documents being prepare for the Tri-Town Septage Treatment Facility Board of Managers.
- Prepare for review and approval by OWNER, its legal counsel and other advisors, contract agreement forms, general conditions and supplementary conditions and, where appropriate, bid forms, invitations to bid and instructions to bidders and assist in the preparation of other related documents. Incorporate the approve documents into the Contract Documents.
  - ENGINEER will prepare specifications as part of the preparation of the Contract Documents. OWNER shall provide ENGINEER any special bid solicitation and/or contract requirements that apply to this project that must be included in the documents.
  - ENGINEER will utilize existing drawings as part of the preparation of the Contract Document that will generally include Plan, Sections and Details in order to define the level effort of the demolition of the structure (5).
- 9.2.2 Provide to the OWNER 60 percent design progress documents for review and comments. Engineer will prepare an estimate of probable cost for the demolition of the facility.
- 9.2.3 In consultation with OWNER and approval of the 60 percent design documents, review and address OWNER's comments; and other agency/committee comments as part of the preparation of 100 percent design progress documents. ENGINEER will update the estimate of probable cost for the demolition of the facility in preparation for advertising the project for bids.

## 9.3 Demolition Phase

- 9.3.1 After written authorization to proceed ENGINEER shall in conformance with SECTION 9.2 as part of the Tri-Town Septage Treatment Facility Demolition Project.
- 9.3.2 Assist OWNER in advertising for and obtaining bids or negotiating proposals for each separate prime contract for Demolition, materials, equipment and services; and, where applicable, maintain a record of prospective bidders to whom Bidding Documents have been issued, attend pre-bid conferences and receive and process deposits for Bidding Documents.

- 9.3.3 Issue Addenda, as appropriate, to interpret, clarify or expand the Bidding Documents.
- 9.3.4 Attend the bid opening, prepare bid tabulation sheets, and assist OWNER in evaluating bids or proposals and in assembling and awarding contracts for Demolition, materials, equipment and services.
- 9.3.5 Advise OWNER as to the necessity of OWNER's providing or obtaining from others data or services of the types described in SECTION 9.4, and assist OWNER in obtaining such data and services.
- 9.3.6 Prepare bid tabulation sheets and assist OWNER in evaluating bids or proposals and in assembling and awarding contracts for Demolition, materials, equipment and services. OWNER recognizes that in order to assist in evaluation of bids or proposals in awarding contracts, ENGINEER may be required to provide OWNER with information, which may lead to the rejection of one or more contractors. Where such information is true to the best of ENGINEER's knowledge, information, and belief, and was provided in good faith, OWNER shall defend, indemnify, and hold harmless ENGINEER and from any claims, loss, damages, or expenses, including attorney's fees, arising out of information and/or advise provided under this AGREEMENT.
- 9.3.7 Administration of Demolition Contract. ENGINEER shall consult with and advise OWNER and act as OWNER's representative, as provided in the General Conditions of the Demolition Contract. The extent and limitations of the duties, responsibilities and authority of ENGINEER, as assigned in said General Conditions, shall not be modified, except as ENGINEER may otherwise agree in writing. All of OWNER's instructions to Contractor will be issued through ENGINEER who will have authority to act on behalf of OWNER only to the extent provided in the General Conditions, except as otherwise expressly stated and agreed to in writing by ENGINEER.
- 9.3.8 ENGINEER's responsibility to provide Basic Services for the Demolition Phase under this Agreement commences with written authorization to proceed with the Demolition Phase Basic Services and terminates at the earlier of the issuance to OWNER of the final Certificate for Payment or sixty (60) days after the date of Substantial Completion of the work, whichever first occurs.
- 9.3.9 Visits to Site and Observation of Demolition. In connection with observations of the work of Contractor(s) while it is in progress:
- ENGINEER shall make up to four visits to the site at intervals appropriate to the various stages of demolition as ENGINEER deems necessary in order to observe, as an experienced and qualified design professional, the progress and quality of the various aspects of Contractor(s)' work. Based on information obtained during such visits and on such observations, ENGINEER shall endeavor to determine in general if such work is proceeding in a manner indicating that the work when completed will be in accordance with the Contract Documents; and ENGINEER shall keep OWNER informed of the progress of the work.
  - The purpose of ENGINEER's visits to, and representation by the Resident Project Representative (if required under SECTION 1 of this Agreement) at, the site will be to enable ENGINEER to better execute the duties and responsibilities assigned to and undertaken by ENGINEER during the Demolition Phase, and, in addition, by exercise of ENGINEER's efforts as an experienced and qualified design professional, to provide for OWNER a greater degree of confidence that



the completed work of Contractor(s) will conform generally to the Contract Documents and that the integrity of the design concept, as reflected in the Contract Documents, has been implemented and preserved by Contractor(s). On the other hand ENGINEER shall not, during such visits or as a result of such observations of Contractor(s)' work in progress, supervise, direct or have control over Contractor(s)' work nor shall ENGINEER have authority over or responsibility for the means, methods, techniques, sequences or procedures of Demolition selected by Contractor(s), safety precautions and programs incident to the work of Contractor(s) or any failure of Contractor(s) to comply with laws, rules, regulations, ordinances, codes or orders applicable to Contractor(s)' furnishing and performing its work. Accordingly, ENGINEER can neither guarantee the performance of the Demolition Contract(s) by Contractor(s) nor assume responsibility for Contractor(s)' failure to furnish and perform its work in accordance with the Contract Documents.

- 9.3.10 Defective Work. During such visits and on the basis of such observations, ENGINEER may disapprove or reject Contractor(s)' work while it is in progress, if ENGINEER believes such work will not produce a completed Project that conforms generally to the Contract Documents or that it will prejudice the integrity of the design concept of the Project as reflected in the Contract Documents.
- 9.3.11 Interpretations and Clarifications. ENGINEER shall issue necessary interpretations and clarifications of the Contract Documents and in connection therewith prepare work directive changes and change orders, as required. In issuing such interpretations and clarifications ENGINEER shall endeavor to secure faithful performance by both OWNER and Contractor(s), shall not demonstrate partiality to either and shall not be liable for the result of any interpretation, clarification or other decision or judgment rendered in good faith.
- 9.3.12 Shop Drawings. ENGINEER shall review and take appropriate action in respect of Shop Drawings (as that term is defined in the aforesaid General Conditions), samples and other data which Contractor(s) is required to submit, but only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. Such reviews and approvals or other actions shall not extend to means, methods, techniques, sequences or procedures of Demolition or to safety precautions and programs incident thereto. ENGINEER's review or other actions, as described above, shall not constitute approval of an assembly of which an item is a component, nor shall it relieve the Contractor(s) of (a) its obligations regarding review and approval of any such submittals, as set forth in General Conditions; and (b) its exclusive responsibility for the means, methods, sequences, techniques and procedures of Demolition, including safety of Demolition.
- 9.3.13 Inspections and Tests. ENGINEER shall have authority, as OWNER's representative, to require special inspection or testing of the work and shall receive and review all certificates of inspection, testing and approvals required by laws, rules, regulations, ordinances, codes, orders or the Contract Documents (but only to determine generally that their content complies with the requirements of, and the results certified indicate compliance with, the Contract Documents).
- 9.3.14 Disputes Between OWNER and Contractor(s). ENGINEER shall act as initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the work there under, and make decisions relating to the acceptability of the work or the interpretation of the requirements of the Contract Documents pertaining to the execution and progress of the work. ENGINEER shall not be liable for the results of any such interpretations or decisions rendered in good faith.

- 9.3.15 Applications for Payment. Based on ENGINEER's on-site observations, as an experienced and qualified design professional, on information provided by the Resident Project Representative and on review of applications for payment and the accompanying data and schedules:
- ENGINEER shall determine the amounts owing to Contractor(s) and recommend in writing (Certificates for Payment) payments to Contractor(s) in such amounts. Such recommendations of payment will constitute a representation to OWNER, based on such observations and review, that the work has progressed to the point indicated and that, to the best of ENGINEER's knowledge, information and belief, the quality of such work is generally in accordance with the Contract Documents (subject to an evaluation of such work as a functioning whole and integrated unit prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and to any other qualifications stated in the recommendation). In the case of unit price work, ENGINEER's recommendations of payment will include final determinations of quantities and classifications of such work (subject to any subsequent adjustments allowed by the Contract Documents).
  - By recommending any payment ENGINEER will not thereby be deemed to have represented that exhaustive, continuous or detailed reviews or examinations have been made by ENGINEER or the Resident Project Representative to check the quality or quantity of Contractor(s)' work as it is furnished and performed beyond the responsibilities specifically designated to ENGINEER in this AGREEMENT and the Contract Documents. ENGINEER's review of Contractor(s)' work for the purposes of recommending payments will not impose upon ENGINEER responsibility to supervise, direct or control such work, for the means, methods, techniques, sequences or procedures of Demolition, safety precautions or programs incident thereto or Contractor(s)' compliance with laws, rules, regulations, ordinances, codes or orders applicable to its furnishing and performing the work. It will, also, not impose responsibility on ENGINEER to make any examination to ascertain how or for what purposes any Contractor(s) has used the monies paid on account of the Contract Price, to determine that title to any of the work, materials or equipment has passed to OWNER free and clear of any lien, claim, security interest or encumbrances or that there may not be other matters at issue between OWNER and Contractor(s) that might affect the amount that should be paid.
- 9.3.16 Visits to Site. ENGINEER shall conduct an observation visit to determine if the work is substantially complete and a final visit to determine if the completed work is acceptable so that ENGINEER may recommend, in writing, final payment to Contractor(s) and may give written notice to OWNER and Contractor(s) that the work is acceptable (subject to any conditions therein expressed); but any such recommendation and notice will be subject to the limitations expressed in paragraph 9.3.15.
- 9.3.17 Limitations of Responsibilities. ENGINEER shall not be responsible for the acts or omissions of any Contractor(s), or of any subcontractor(s) or supplier(s), or any of Contractor(s)' or subcontractor(s)' or supplier(s)' agents or employees or any other persons (except ENGINEER's own employees and agents) at the site or otherwise furnishing or performing Contractor(s)' work.

#### **9.4 Services Not Included in this Agreement**

- 9.4.1 General: Unless specifically called for under SECTION 1 of this Agreement, the services listed below in this SECTION 9.4 are not included as part of this Agreement and are not paid for by OWNER.
- 9.4.2 Services to make measured drawings of or to investigate existing conditions or facilities, or to verify the accuracy of drawings or other information furnished by OWNER.
- 9.4.3 Services resulting from significant changes in the general scope, extent or character of the Project or its design including, but not limited to, changes in size, complexity, unexpected site conditions or unanticipated hazardous materials, OWNER's schedule, character of Demolition or method of financing; and revising previously accepted studies, reports, design documents or Contract Documents when such revisions are required by changes in laws, rules, regulations, ordinances, codes or orders enacted subsequent to the preparation of such studies, reports or documents, or are due to any other causes beyond ENGINEER's control.
- 9.4.4 Investigations and studies involving, but not limited to, detailed consideration of operations, maintenance and overhead expenses; during the course of design; the preparation of feasibility studies; cash flow and economic evaluations, rate schedules and appraisals; assistance in obtaining financing for the Project; evaluating processes available for licensing and assisting OWNER in obtaining process licensing; detailed quantity surveys of material, equipment and labor; and audits or inventories required in connection with Demolition performed by OWNER.
- 9.4.5 Services during out-of-town travel required of ENGINEER other than visits to the site or OWNER's office.
- 9.4.6 Assistance in connection with bid protests, rebidding or renegotiating contracts for Demolition, materials, equipment or services.
- 9.4.7 Preparing to serve or serving as a consultant or witness for OWNER in any litigation, arbitration or other legal or administrative proceeding involving the Project.
- 9.4.8 Additional or extended services during Demolition made necessary by: (a) work damaged by fire or other cause during Demolition; (b) a significant amount of defective or neglected work of Contractor(s); (c) prolongation of the contract time of any prime contract beyond the date for final completion as set forth in the Contract Documents; (d) acceleration of the progress schedule involving services beyond normal working hours [five 8-hour days per week]; and (e) default by Contractor(s).
- 9.4.9 Protracted or extensive assistance in the utilization of any equipment or system.

#### **9.5 Owner's Responsibilities**

- 9.5.1 Unless specifically called for as a responsibility of ENGINEER under SECTION 9.1, OWNER shall do the following in a timely manner so as not to delay the services of ENGINEER.

- 9.5.2 Designate in writing a person to act as OWNER's representative with respect to the services to be rendered under this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define OWNER's policies and decisions with respect to ENGINEER's services for the Project.
- 9.5.3 Provide all criteria and full information as to OWNER's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations; and furnish copies of all design and Demolition standards, which OWNER will require to be included in the Drawings and Specifications.
- 9.5.4 Assist ENGINEER by placing at ENGINEER's disposal all available information pertinent to the Project including previous reports and any other data relative to design or Demolition of the Project.
- 9.5.5 Furnish to ENGINEER, as required for performance of ENGINEER's Basic Services, the following:
- Data prepared by or services of others, including without limitation borings, probes and subsurface explorations, hydrographic surveys, laboratory tests and inspections of samples, materials and equipment;
  - Appropriate professional interpretations of all of the foregoing;
  - Environmental assessment and impact statements;
  - Property descriptions;
  - Zoning, deed and other land use restriction; and other special data or consultations not covered in SECTION 3;
- all of which ENGINEER may use and rely upon in performing services under this Agreement.
- 9.5.6 Furnish right of entry and permission for ENGINEER to perform planned surveys, borings, and other investigation and exploration, pursuant to the scope of services. Where client is not the owner of the site, and services includes borings, trenches, or other such invasive testing measures, ENGINEER may require written authorization from the property owner to perform such services. ENGINEER will take reasonable precautions to minimize damage to the property from use of equipment, but have not included in the fee the costs of restoration of damage that may result from such operations. If ENGINEER is required to restore the property to its former condition, the cost will be added to its fee.
- 9.5.7 Examine all studies, reports, sketches, Drawings, Specifications, proposals and other documents presented by ENGINEER, obtain advice of an attorney, insurance counselor and other consultants, as OWNER deems appropriate for such examination, and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of ENGINEER.
- 9.5.8 Furnish approvals and permits from all governmental authorities having jurisdiction over the Project and such approvals and consents from others, as may be necessary for completion of the Project.

- 9.5.9 Provide such accounting, independent cost estimating and insurance counseling services, as may be required for the Project, such legal services as OWNER may require or ENGINEER may reasonably request with regard to legal issues pertaining to the Project, including any that may be raised by Contractor(s), such auditing service as OWNER may require to ascertain how or for what purpose any Contractor(s) has used the monies paid under the Demolition Contract, and such inspection services as OWNER may require to ascertain that Contractor(s) is complying with any law, rule, regulation, ordinance, code or order applicable to its furnishing and performing the work.
- 9.5.10 If OWNER designates a person to represent OWNER at the site who is not ENGINEER or ENGINEER's agent or employee, the duties, responsibilities and limitations of authority of such other person and the effect thereof on duties and responsibilities of ENGINEER and the Resident Project Representative (and any assistants) will be set forth in an exhibit that is to be identified, attached to and made a part of this Agreement before such services begin.
- 9.5.11 If more than one prime contract is to be awarded for Demolition, materials, equipment and services for the entire Project, OWNER shall designate a person or organization with authority and responsibility for coordinating the activities among the various prime contractors.
- 9.5.12 Furnish to ENGINEER data or estimated figures as to OWNER's anticipated costs for services to be provided by others for OWNER so that ENGINEER may make the necessary findings to support opinions of probable Total Project Costs.
- 9.5.13 Attend the pre-bid conference, bid opening, pre-Demolition conferences, Demolition progress and job related meetings, substantial completion inspections and final payment inspections.
- 9.5.14 Give prompt written notice to ENGINEER whenever OWNER observes or otherwise becomes aware of any development that affects the scope or timing of ENGINEER's services or any defect or non-conformance in the work of any Contractor(s).
- 9.5.15 Submit to ENGINEER the proposed language of certifications, affidavits and/or assignments requested of ENGINEER or ENGINEER's independent contractors and consultants for review and approval at least 14 days prior to execution. OWNER shall not request certifications and/or affidavits that would require expertise, knowledge or services beyond the scope of this Agreement.
- 9.5.16 Bear all costs incident to compliance with the requirements of this SECTION 9.4."

2. **Change to Deliverables:**

2.1 Attachment 1 – Scope of Services, List of Deliverables, add the following new Articles:

Number	Deliverable	Draft	Final
<b>Task Nos. 1 thru 7 - FY 16 Water Quality and Wastewater Planning</b>			
<b>Task 3 - NT Technologies-Demonstration Project Pre-planning and Design and Implementation</b>			
A.	Aquaculture/Shellfish Propagation - Design and Installation of a demonstration project on Lonnies Pond in June 2016.	75%	25%
<b>Task No. 8 - FY 17 Interim Planning and Implementation</b>			
8.1	<b>Continued Planning and Engineering</b>		
8.1.1	<b>Preplanning - Treatment and Disposal Site Investigations</b>		
A.	Technical Memorandum for the investigation of the treated wastewater effluent flow paths from Parcel 1/1A with regards to Namskaket and Little Namskaket Marshes.	75%	25%
B.	Technical Memorandum on the environmental screening and update of issues related to use of Parcel 1/1A.	75%	25%
C.	Technical Memorandum on the preliminary evaluations of up to six potential groundwater effluent disposal sites for the Downtown Area.	75%	25%
D.	Technical Memorandum on Pleasant Bay Alliance – Composite Wastewater Management Analysis and Workshop.	---	100%
E.	Technical Memorandum on Composite Wastewater Management Analysis with regards to the Nauset Harbor and Rock Harbor Creek in the Town of Orleans, MA and Workshop.	---	100%
8.1.2	<b>NT Technologies-Demonstration Project Pre-planning and Design and Implementation</b>		
A.	Technical Memorandum on the feasibility of individual on-site nitrogen removing biofilters used as an alternative to Floating Constructed Wetlands for nitrogen removal.	75%	25%

Number	Deliverable	Draft	Final
B. Aquaculture/Shellfish Propagation			
1.	Lonnies Pond Maintenance	50%	50%
2.	Technical Memorandum on a preliminary work plan for Quanset Pond including baseline monitoring, and conduct viability study to optimize tray size, planting density and installation logistics.	75%	25%
3.	Technical Memorandum on the planning of a population survey of quahog production on Town Cove as first step in demonstration project design.	75%	25%
4.	Technical Memorandum on consultation with existing growers to remove constraints and expand and optimize production from existing grants.	75%	25%
C. Permeable Reactive Barriers			
1.	Design of PRB demonstration project at Eldredge Park	75%	25%
2.	Installation of PRB demonstration project at Eldredge Park.	75%	25%
3.	Scope of work and preliminary project cost estimate for a PRB demonstration project at the Landfill.	75%	25%
<b>8.1.3 Design-WWTF, Collection System, Effluent Disposal System, Effluent Disposal and NT Technologies</b>			
A.	Public-Private Partnership risk analysis, including DB and DBO procurement, Workshop.	---	100%
B.	Technical Memorandum on the Public-Private Partnership risk analysis, including DB and DBO procurement for the proposed Downtown Area wastewater system focused on issues of concern to the Town prior to making commitment to any private developer for the proposed Downtown Area wastewater system.	75%	25%

Number	Deliverable	Draft	Final
<b>8.1.4</b>	<b>Regulatory Coordination</b>		
A.	Technical Memorandum on Cape Cod Commission Compliance Requirements.	75%	25%
B.	Technical Memorandum on MassDEP Compliance Requirements.	75%	25%
C.	Technical Memorandum on the MassDEP, CCC, MEPA and NHESP permit requirements and coordination for the preliminary location for the full scale non-traditional technologies, schedule, and an estimate of cost to complete the permit applications/submittal.	75%	25%
D.	Technical Memorandum Summarizing Meeting with MassDEP on status of Rock Harbor Creek WQ and potential UAA.	75%	25%
E.	Technical Memorandum Summarizing MassDEP and CCC Comments on the Draft CWMP.	75%	25%
F.	Technical Memorandum on Other Agency Compliance Requirements.	75%	25%
G.	Prepare Pre-Final Amended CWMP	75%	25%
<b>8.2</b>	<b>Adaptive Management Implementation</b>		
<b>8.2.1</b>	<b>Water Quality Monitoring MEP Compliance</b>		
A.	SMAST review of Pleasant Bay water quality evaluation by AECOM.	—	100%
<b>8.2.2</b>	<b>Water Quality Monitoring Project Baseline</b>		
A.	Review and comment on the SMAST limited monitoring program to collect baseline data and initial operational data on Lonnie's Pond demonstration project.	—	100%
<b>8.3</b>	<b>Program Management</b>		
<b>8.3.1</b>	<b>Public Engagement Coordination</b>		
A.	Prepare for and attend up to seven subcommittee workshops for the three non-traditional technologies Nitrogen Removing Biofilters (1); Shellfish/Aquaculture (4); and Permeable Reactive Barriers (2).	—	15% per workshop
B.	Prepare for and attend five OWQAP Meetings.	—	20% per meeting



Number	Deliverable	Draft	Final
	C. Prepare for and attend three Other Public Meetings.	---	33% per meeting
	D. Three status reports for the three non-traditional technologies demonstration projects (Nitrogen Removing Biofilters; Shellfish/Aquaculture; and Permeable Reactive Barriers).	---	33% per report
<b>8.3.2</b>	<b>Financial Modeling Analysis</b>		
	A. Technical Memorandum on Updated Capital and O&M Cost Estimates.	75%	25%
	B. Technical Memorandum on the "Best Case" project cost estimate and rerun of the financial model.	75%	25%
	C. Technical Memorandum on up to two additional scenarios involving Public-Private Partnerships with model refinements, as required, and meeting with the Board of Selectmen and Finance Committee.	75%	25%
<b>9</b>	<b>Compost Shelter Demolition</b>		
<b>9.1</b>	<b>Design Phase</b>		
	A. Investigations	---	100%
	B. Contract Documents – 60%	---	100%
	C. Contract Document – 100%	---	100%
<b>9.2</b>	<b>Bidding Phase</b>		
	A. Advertisement through Recommendation	---	100%
	B. Town Meeting and Award	---	100%
<b>9.3</b>	<b>Deconstruction Phase</b>		
	A. Pre-Demolition	---	100%
	B. Demolition - 5 Months	---	20% per month

3. **Change in Project Schedule (attach schedule if appropriate):**

Modify the time for completion from May 31, 2016 to October 31, 2016.

4. **Change in Consultant's Compensation:**

The Services set forth in this Change Order will be performed on the following basis:

- No change to Compensation
- Time & Material (See Exhibit B for the Hourly Labor Rate Schedule)
- Time and Materials with a Not-to-Exceed amount of (\$ Numerical Amount). The Hourly Labor Rate Schedule is set forth in EXHIBIT B (if applicable). Reimbursable expenses are included in the overall Not to Exceed cap.
- Lump Sum [\$571,560]

Number	Milestone/Deliverable	Payment Amount
<b>Task Nos. 1 thru 7 - FY 16 Water Quality and Wastewater Planning</b>		
<b>Task 1 - Facilities Engineering</b>		
	A. Technical Memorandum on Updated Capital and O&M	(\$13,400)
<b>Task 3 - NT Technologies-Demonstration Project Pre-planning and Design and Implementation</b>		
	A. Aquaculture/Shellfish Propagation - Design and Installation of a demonstration project on Lonnie's Pond in June 2016.	\$91,000
<b>Task 6 - Regulatory Review and Coordination</b>		
	A. Cape Cod Commission Compliance Requirements Technical Memorandum	
	B. MassDEP Compliance Requirements Technical Memorandum	(\$41,900)
	C. MassDEP, CCC, MEPA and NHESP permit requirements; MassDEP Rock Harbor Creek WQ and potential UAA Meeting; MassDEP and CCC Comments Draft CWMP; and Other Agency Compliance Requirements Technical Memorandums	
<b>Task 7 - Preparation of the Amended CWMP</b>		
	A. Final Amended CWMP	(\$20,700)
<b>Task 8 - FY 17 Interim Planning and Implementation</b>		
<b>8.1 Continued Planning and Engineering</b>		
<b>8.1.1 Preplanning - Treatment and Disposal Site Investigations</b>		
	A. Parcel 1/1A Effluent Flow Paths Technical Memorandum	\$6,900
	B. Parcel 1/1A Environmental Screening Technical Memorandum	\$8,800

C.	Preliminary Evaluations of Potential Groundwater Effluent Disposal Site Technical Memorandum	\$4,500
F.	Pleasant Bay Alliance – Composite Wastewater Management Analysis Technical Memorandum and Workshop.	\$5,500
G.	Composite Wastewater Management Analysis - Nauset Harbor and Rock Harbor Creek Technical Memorandum and Workshop.	\$5,500
<b>8.1.2 NT Technologies-Demonstration Project Pre-planning and Design and Implementation</b>		
A.	On-site Nitrogen Removing Biofilters Feasibility Technical Memorandum	\$10,400
B.	Shellfish/Aquaculture	
•	Lonnies Pond Maintenance	\$59,680
•	Quanset Pond Preliminary Work Plan Technical Memorandum	\$11,900
•	Town Cove Quahog Population Survey Technical Memorandum	\$11,900
•	Expand and Optimize Production Technical Memorandum	\$11,900
C.	Permeable Reactive Barriers	
•	Design of PRB demonstration project at Eldredge Park	\$24,000
•	Installation of PRB demonstration project at Eldredge Park	\$166,650
•	Scope of work and preliminary project cost estimate for a PRB demonstration project at the Landfill.	\$5,000
<b>8.1.3 Design-WWTF, Collection System, Effluent Disposal System, Effluent Disposal and NT Technologies</b>		
A.	P3 including DB or DBO procurement Risk Analysis Technical Memorandum	\$16,400
B.	Public-Private Partnership Workshops	\$14,600
<b>8.1.4 Regulatory Coordination</b>		
A.	Cape Cod Commission Compliance Requirements Technical Memorandum	\$7,000
B.	MassDEP Compliance Requirements Technical Memorandum	\$7,000

Number	Milestone/Deliverable	Payment Amount
	C. Other Agency Compliance Requirements Technical Memorandum	\$7,200
	D. MassDEP, CCC, MEPA and NHESP permit requirements Technical Memorandum	\$6,700
	E. Pre-Final Amended CWMP	\$21,500
<b>8.2</b>	<b>Adaptive Management Implementation</b>	
	<b>8.2.1 Water Quality Monitoring MEP Compliance</b>	
	A. Review and Comment on SMAST Pleasant Bay Water Quality Evaluation	\$5,400
	B. Miscellaneous Consultation	\$5,000
	<b>8.2.2 Water Quality Monitoring Project Baseline</b>	
	A. Review and Comment on SMAST Limited Monitoring Program	\$5,400
<b>8.3</b>	<b>Program Management</b>	
	<b>8.3.1 Public Engagement Coordination</b>	
	A. Subcommittee Workshops (7)	\$22,400
	B. OWQAP Meetings (5)	\$23,820
	C. Other Public Meetings	\$7,560
	D. Status Reports (3)	\$8,100
	<b>8.3.2 Financial Modeling Analysis</b>	
	A. Technical Memorandum on Updated Capital and O&M Cost Estimates.	\$6,000
	B. "Best Case" Technical Memorandum	\$31,150
	C. Public-Private Partnership Scenarios Technical Memorandum	\$13,600
	D. Cost Comparison Technical Memorandum	\$10,100
<b>9</b>	<b>Compost Shelter Demolition</b>	
	<b>9.1 Design Phase</b>	
	A. Investigations	\$1,000
	B. Contract Documents – 60%	\$3,000
	C. Contract Document – 100%	\$1,000

Number	Milestone/Deliverable	Payment Amount
<b>9.2</b>	<b>Bidding Phase</b>	
	C. Advertisement through Recommendation	TBD
	D. Town Meeting and Award	TBD
<b>9.3</b>	<b>Deconstruction Phase</b>	
	C. Pre-Demolition	TBD
	D. Demolition - 5 Months	TBD

[ ] Cost Plus Fixed Fee: [Cost \$ *Numerical Amount* and Fee \$ *Numerical Amount*]

Therefore, the total authorized Compensation, inclusive of the Change Order is \$1,561,500.

Funding Allocation Summary	
Description	Value
FY16 Town Meeting – FY16 Water Quality and Wastewater Planning	\$990,000
FY17 Town Meeting – FY17 Interim Planning and Implementation	\$551,560
Compost Shelter Demolition – Design Phase	\$5,000
Cape Cod Commission Aquaculture/Shellfish Propagation Grant	\$15,000
<b>Total Funding Allocation</b>	<b>\$1,561,560</b>

Engineering Agreement Summary	
Description	Value
Original Agreement - FY16 Water Quality and Wastewater Planning	\$990,000
Change Order No. 1 - FY17 Interim Planning and Implementation	\$571,560
<b>Total Authorized Compensation</b>	<b>\$1,561,560</b>

5. **Project Impact:** None
6. **Other Changes** (including terms and conditions): None
7. All other terms and conditions of the Agreement remain unchanged.

8. Each Party represents that the person executing this Change Order has the necessary legal authority to do so on behalf of the respective Party.

**AECOM Technical Services, Inc.**

**CLIENT: Town of Orleans, MA**

Betsy Shreve-Gibb  
Signature

John Kelly  
Signature

Betsy Shreve-Gibb  
Printed Name

John Kelly  
Printed Name

Vice President  
Title

Orleans Town Administrator  
Title

Address  
9 Jonathan Bourne Road  
Pocasset, MA 02559

Address  
19 School Road  
Orleans, MA 02653

**Town Accountant's Certificate**

I hereby certify that an appropriation in the amount of this contract is available therefore and that the undersigned official of the Town has been authorized to execute said contract and approve all requisitions and change orders.

David A. W. Throw  
Signature

DAVID A. W. THROW  
Printed Name

Finance Director/Town Accountant  
Title

8/4/16  
Date

[End of Agreement]

8. Each Party represents that the person executing this Change Order has the necessary legal authority to do so on behalf of the respective Party.

**AECOM Technical Services, Inc.**

**CLIENT: Town of Orleans, MA**

Betsy Shreve-Gibb  
Signature

John Kelly  
Signature

Betsy Shreve-Gibb  
Printed Name

John Kelly  
Printed Name

Vice President  
Title

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**Town Accountant's Certificate**

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David A. Withrow  
Signature

DAVID A. WITHROW  
Printed Name

Finance Director/Town Accountant  
Title

8/4/16  
Date

[End of Agreement]

