

# **AGREEMENT FOR PROFESSIONAL SERVICES**

**For**

**Macallen Dam Removal Feasibility and  
Impact Analysis**

**Between**

**CLIENT**

Town of Newmarket  
186 Main St.  
Newmarket, NH 03857

**AND**

**CONSULTANT**

Gomez and Sullivan Engineers, P.C.  
288 Genesee St.  
Utica, NY 13502  
(315) 724-4860

# **AGREEMENT FOR PROFESSIONAL SERVICES**

This AGREEMENT is made this 1st day of October, 2013 between

**CLIENT**

Town of Newmarket  
186 Main St.  
Newmarket, NH 03857

**and**

**CONSULTANT**

Gomez and Sullivan Engineers, P.C.  
288 Genesee St.  
Utica, NY 13502  
(315) 724-4860

Town of Newmarket ("Client") and Gomez and Sullivan Engineers, P.C. ("Consultant") for mutual consideration, agree as follows:

1. Gomez and Sullivan's (5/3/2013, updated July 1, 2013) "Proposal for Macallen Dam Removal Feasibility and Impact Analysis" shall define the Project Approach, Scope of Services, Schedule and Compensation/Fee, and is attached hereto as EXHIBIT A and made a part of this Agreement.
2. The General Terms and Conditions of this Agreement are defined by EXHIBIT B, which is attached hereto and made a part of this Agreement.
3. This Agreement may only be amended in writing signed by both parties.
4. This Agreement shall include General Terms and Conditions (EXHIBIT B), Consultant's Proposal for Engineering Services (EXHIBIT A), and possibly signed written amendments to this Agreement. In the event of a conflict between the terms of these documents, the order of precedence will be as follows with the first named having the higher precedence:
  - Properly signed written Amendments to this Agreement (if any)
  - General Terms and Conditions
  - Consultant's Proposal for Engineering Services
  - Client's Request for Proposal

Agreement  
October 1, 2013

IN APPROVAL, authorized representatives of the Parties to this Agreement have signed below.  
This Agreement shall become effective upon signature by both parties.

**Town of Newmarket**

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Gomez and Sullivan Engineers, P.C.**

Name: Tom Sullivan\_\_\_\_\_

Title: Vice-President\_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## **EXHIBIT A**

### **Gomez and Sullivan's (7/1/2013) Proposal for Macallen Dam Removal Feasibility and Impact Analysis**



GOMEZ AND SULLIVAN  
Engineers, P.C.

41 Liberty Hill Road  
PO Box 2179  
Henniker, NH 03242  
T (603) 428-4960  
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May 3, 2013

Diane Hardy, Town Planner  
Town of Newmarket  
186 Main St.  
Newmarket, NH 03857

Re: Lamprey River Macallen Dam Removal Feasibility and Impact Analysis

Dear Ms. Hardy:

As discussed during our April 11, 2013 meeting and follow-up conference call on May 1 with the Town of Newmarket (Town) and other Project Partners<sup>1</sup>, the Gomez and Sullivan Team has developed a revised scope, cost estimate and schedule to evaluate the feasibility of removing the Macallen Dam on the Lamprey River. Per your feedback, we modified the scope considerably relative to the original scope submitted in August 2012. Our revised scope, cost estimate and schedule were developed based on our understanding of the Project Partners' priorities and goals, new information available since our original scope was released (the Wright-Pierce Report and the NHDES response to the report) as well as our professional judgment.

We appreciate the opportunity to participate in this Project, and look forward to starting work. If you have any questions regarding our team or proposal, please do not hesitate to call me or Gary Lemay at 603-428-4960.

Sincerely,

Mark Wamser, PE  
Water Resource Engineer

Gary Lemay  
Water Resource Engineer

cc: Tom Sullivan, Gomez and Sullivan  
Eric Hutchins, NOAA  
Debbie Loiselle, NHDES  
Kevin Lucey, NHDES  
Cheri Patterson, NHFGD

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<sup>1</sup> Project Partners include National Oceanic and Atmospheric Administration (NOAA), New Hampshire Department of Environmental Services (NHDES), and New Hampshire Fish and Game Department (NHFGD).

October 1, 2013

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## 1.0 Scope of Services

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This section describes the tasks that will be conducted as part of the study. The original proposal followed the tasks exactly as outlined in the RFP, and specified each task as a Phase I task, Phase II task, or Excluded. This document only includes the tasks identified by the Project Partners as Phase I tasks. Phase II tasks will be addressed by the Project Partners following completion of Phase I.

It is important that town government officials understand that regardless of the dam removal feasibility study results, major modifications to the dam are necessary to meet NHDES Dam Safety requirements. Based on Wright-Pierce's February 6, 2013 report, the dam does not pass the required design flood (100-year flood) for the dam's high hazard classification. Table 2<sup>2</sup> of the Wright Pierce lists alternatives to increase spillway capacity sufficient to pass the 100-year flood. Generally, the alternatives fell into the following categories a) lowering the spillway crest elevation, b) increasing the length of the spillway crest and c) some combination of a) and b). Per Table 2, to pass the 100-year flood and leave the spillway crest elevation as its current elevation would require lengthening the spillway crest from the current 70 feet to 350 feet. Based on the amount of infrastructure abutting the dam, lengthening the spillway is not feasible. Per the Wright Pierce report, lowering the spillway crest between 8 to 10 feet appears to be a "potential" feasible alternative<sup>3</sup>. Also note that in a March 5, 2013 letter from NHDES Dam Safety to the town, NHDES concurred with the finding of the Wright Pierce report relative to the magnitude of the 100-year flood.

Relative to this feasibility study, typically the "status-quo" alternative is considered as a basis of comparison. However, in this case, the "status quo" alternative has been eliminated because the dam does not meet NHDES Dam Safety criteria due to inadequate spillway capacity. Thus, for purposes of this study, the following two alternatives will be evaluated:

- Dam Removal Scenario: Remove the spillway, fish ladder and legacy timber-crib dam; leave gate structure and abutments in place, but wall off the arched entrance into the former intake.
- Dam Modification Scenario: Based on the Wright-Pierce report, it appears that the only feasible alternative to increase spillway capacity is to lower the dam's spillway crest on the order of 8 to 10 feet.

Again, it is important to understand that:

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<sup>2</sup> Table 2 of the report lists various alternatives and associated costs. For purpose of this study, we will rely on the Wright-Pierce cost estimates to represent the dam modification alternative.

<sup>3</sup> Given our understanding of the dam layout and surrounding structures, we considered any alternative that called for lengthening the spillway as infeasible (see Wright Pierce Report).

- a) either dam removal or dam modification will result in lowering the spillway crest elevation, and hence the size of the current impoundment will be directly impacted; and
- b) the town has a certain “sunk” cost relative to modifying the dam to meet dam safety criteria.

We highly recommend that town government officials conduct a public outreach effort early-on to educate townspeople (particularly abutters to the impoundment) that modifications to the dam are necessary to bring the dam into compliance with NHDES Dam Safety regulations. In addition, it should be explained that these modifications will directly impact the water levels behind the dam. Based on our on-water site visits, both the dam modification and dam removal alternatives will likely result in a reduction in the width and depth of the existing impoundment, which will directly impact property owners and recreation users.

As described below and in our April 11 meeting, we request that the town purposely lower the impoundment at some point in fall 2013 to facilitate data collection. The drawdown will also provide an excellent opportunity to visually document changes within the impoundment via photographs.

## **Existing Data Collection and Review**

### **Task 10: Collect and Review Available Data**

The reports and items referenced in the RFP have already been reviewed by the Project Manager, with the exception of item 1.1.12 (UNH research for studying land use and modeling flooding associated with climate change on the Lamprey River) in the RFP. We have secured other reports at the NHDES and NHDOT including:

- Corps of Engineers Phase I Dam Safety Inspection Report.
- Plan and profile drawings of the fish ladder.
- Drawings of the current Rte. 108 superstructure. NHDOT has no information on the old stone abutments. NHDOT also has not performed formal scour calculations, but their screening analysis showed it to be low risk.
- Other miscellaneous documents secured during the NHDES office visit.
- The town of Newmarket provided us with Wright-Pierce’s hydraulic model (HEC-RAS) at the April 11th meeting.
- We recently received the Newmarket town tax maps of the parcels bordering the impoundment and 250 feet below the dam in GIS format. This also included a listing of name/mailling addresses for property owners. We have also received similar GIS tax maps from Durham around their portion of the impoundment.

The following additional data is in the process of being obtained:

- We will contact UNH Granit to obtain LiDAR data of the project area in electronic format for us in mapping and hydraulic modeling.
- We will contact NHFGD to obtain any records of species, numbers, and timing of migratory fish utilizing the existing ladder.
- We will contact Newmarket and NHDES to determine if there is any past documentation (pictures) in the project area during previous water level drawdowns at the dam.

As noted by Rick Malasky (Newmarket Department of Public Works) during the pre-bid site visit and at the April 11<sup>th</sup> meeting, there are no town water supply withdrawals from the impoundment and no sewer/water lines crossing the impoundment within Newmarket. Rick also noted that dry hydrants, currently present in some locations along the impoundment, are not relied upon and that residents bordering the river are fed by public water (no wells). Given this, we are not seeking drawings of this infrastructure within the confines of Newmarket. However, residential wells flanking the impoundment in Durham will require further investigation as noted below.

#### **Task 20: Technical Summary Memorandum**

After reviewing the existing data, a technical summary memo will be prepared discussing major findings. The purpose of the memo is to notify Project Partners of any major issues discovered during the data research that could potentially result in modifying the approach or scope. The technical memo will include:

- aerial photographs;
- due diligence relative to the potential for contaminated sediments;
- estimated numbers (if available) of migratory fish using the ladder in the last decade;
- summary of available water quality data in the project area;
- summary of NHDOT information on the Route 108 Bridge;
- summary of dam inspection reports and findings;
- summary of any cultural resources completed at the time the memo is provided.

Deliverables will include an electronic (PDF) version of the technical memo.

### **Field Survey and Base Mapping**

#### **Task 30: Dam Structures and Topography Survey**

We will complete a survey of the following, provided there are no safety-related issues.

- Plan and profile of the dam including abutments, gate openings, and spillway;
- Plan and profile of retaining walls on both river banks from the dam to the Rte. 108 Bridge;



- Plan of fish ladder (we obtained the plans of the ladder from the NHDES file search, we have assumed that these are as-built drawings);
- Plan of building foundations located in close proximity to the dam;
- Plan and profile of Rte. 108 Bridge opening;
- Plan and, if possible, profiles of the legacy dam;
- Planimetrics (overhead wires, etc.) in the vicinity of the dam or potential access routes;
- The LiDAR data will be used for the upland topographic survey;
- A few transects immediately below the dam, which are needed to simulate dam-out conditions in the hydraulic model.

Note that the survey will not include any underwater work, such as measuring the base of underwater foundation walls unless it can be readily obtained. Also, the survey will not include property lines; instead we will rely on the tax maps. We have assumed that existing floodplain boundaries for the 100-year flood (commonly called the “base flood”) will be obtained from FEMA and shown on the existing conditions plan map.

#### **Task 40: River/Impoundment Bathymetric Survey**

A detailed bathymetric survey is important to reasonably predict the river’s depth and width above the dam under the two alternatives. We reviewed the Wright-Pierce HEC-RAS hydraulic model, and while it appears most of bathymetry between the Route 108 Bridge and dam can be used, more accurate bed elevations are necessary to better understand the impoundment’s sub-surface structure and any hydraulic controls. In short, there were few transects located in the impoundment above the Route 108 Bridge. We already conducted a preliminary bathymetric survey of the impoundment; however, supplemental data collection is needed at particular locations of interest to fine-tune the bathymetric map. A follow-up survey will be conducted and additional longitudinal profiles and transects will be collected to develop a thorough bathymetric map. Surveys will be conducted using a boat-mounted echosounder ( $\pm 1\%$  accuracy) to measure depths. A GIS and CAD version of the bathymetric map will be produced. This work will be conducted when the impoundment is full (at the spillway crest). This task includes time for data collection as well as post-processing (QA/QC and integrating with other datasets).

#### **Task 50: Sediment Mapping Survey**

Cursory sediment composition mapping was conducted as part of the preliminary site investigation in preparing our proposal, but no sediment thickness mapping was obtained. Given the extensive length and area of the dam’s impoundment, it would be exceedingly expensive to obtain sediment thickness measurements at pre-determined transects. To focus the sediment thickness mapping effort, we propose to conduct the sediment thickness mapping at areas that the hydraulic model identifies as experiencing high shear stresses. By focusing on the areas with high shear stresses, the mapping effort will be substantially less than a full mapping effort.

We propose conducting the sediment thickness mapping when the impoundment is lowered in the fall of 2013 and water depths are shallower, making the probing easier (better footing and less water having to penetrate through before hitting sediment). We propose to manually drive a steel rod to refusal along transects identified by the hydraulic model results to estimate sediment composition and thickness. For cost estimating purposes we have assumed up to a total of 10 transects of sediment thickness mapping will be obtained within the Piscassic and Lamprey Rivers. The sediment thickness will be measured every 10 feet across each transect. The transect endpoints will be located with GPS and permanent fixtures will be set to benchmark the left and right transect ends. A description of the probing will be provided in the feasibility report including: the type of material penetrated (based on feel), if the sediment was uniform throughout the vertical column, and other notes to qualitatively describe the sediment. Our proposed method will not provide an estimate of the impoundment's entire sediment volume.

In addition to the 10 transects, sediment probing will be conducted along three other transects while the impoundment is drawn down, including immediately upstream of the dam, in the vicinity of the legacy dam, and beneath the Rte. 108 Bridge. The purpose of these transects is to locate the depth to bedrock, which will be used later in the hydraulic model. In addition to the three other transects, sediment probing will be conducted beneath the Railroad Bridge crossing the Piscassic River.

#### **Task 60: Download and Map National Wetlands Inventory Boundaries**

This task involves downloading a GIS version of the National Wetlands Inventory (NWI) wetlands boundaries for the area around the Macallen Dam impoundment. The wetland boundary will be used as part of the existing conditions plan and base map.

#### **Task 70: Existing Conditions Plan and Base Map**

Two existing conditions plans will be developed. One plan will include the dam and impoundment. The second plan will extend from the Rte. 108 Bridge to approximately 250 feet below the dam. The existing conditions plan will be supplemented with the survey described above, bathymetric mapping results, upland topography from LiDAR, the 100-year floodplain, and the NWI wetland boundaries.

#### **Task 80: Drawdown Photo-Documentation**

As discussed with the Project Partners on April 11th, the reservoir will be drawn down in September or October 2013. This will provide an excellent opportunity to understand changes in the impoundment and in the vicinity of the dam due to dam modification or removal. This task consists of the project manager and another staff member visiting the study area during the fall drawdown to photograph and videotape the site. Photos will be geo-referenced and field notes will be taken to record other important observations. Per our conference call on May 1, we discussed having a public meeting after Labor Day (September 3, 2013), which would provide an opportunity to notify the public of the impending fall drawdown. On the May 1 call, it was noted

that pending the magnitude of inflow, the drawdown may require a week to complete as water elevations must be lowered slowly to allow slow-moving aquatic organisms (such as mussels) ample time to move into wetted areas. After notifying the public, the drawdown could be initiated on Monday, September 9<sup>th</sup>. Gomez and Sullivan would require approximately 2-3 days to photo-document the partially dewatered impoundment, conduct the sediment probing (Task 50), conduct the infrastructure assessment (Task 150) and conduct the site visit associated with cultural resources investigation (Task 130).

## Sediment Evaluation

### Task 90: Review Existing and Historical Information

Prior to conducting any sediment sampling, due diligence work will be conducted to identify potential historic and known current sources of contamination in the area that would inform the sediment sampling plan. We will search websites (NHDES One-Stop, EPA Superfund, Remediation Sites, Hazardous Waste Generators, NPDES outfalls, etc.) to determine what, if any spills, or sources of contamination may be present in the project area. A preliminary analysis of the 303(d) lists shows that PAHs and other chemical impairments are present immediately below the dam (see Table 1 for a list of impairments).

Table 1: Constituents on 303(d) List

NH DES Assessment Unit ID	Assessment Unit Name	Use Description	Impairment Name
NH EST 600030709-01-01	Lamprey River North	Aquatic Life	2-Methylnaphthalene, Acenaphthylene, Aluminum, Anthracene, Arsenic, Benzo(a)pyrene (PAHs), Benzo(a)pyrene (PAHs), Benzo(a)anthracene, Benzo(a)anthracene, Cadmium, Chlorophyll-a, Chrysene (C1-C4), Chrysene (C1-C4), Copper, DDD, DDE, DDT, Dibenz[a,h]anthracene, Dibenz[a,h]anthracene, Dissolved oxygen saturation, Fluoranthene, Fluoranthene, Fluorene, Lead, Mercury, Naphthalene, Nickel, Nitrogen (Total), Dissolved Oxygen, Phenanthrene, Pyrene, pH, trans-Nonachlor
NH EST 600030709-01-01	Lamprey River North	Fish Consumption	Polychlorinated biphenyls
NH EST 600030709-01-01	Lamprey River North	Primary Contact Recreation	Chlorophyll-a, Nitrogen (Total)
NH EST 600030709-01-01	Lamprey River North	Shellfishing	Dioxin (including 2,3,7,8-TCDD), Polychlorinated biphenyls
NH EST 600030709-01-02	Lamprey River South	Aquatic Life	Chlorophyll-a, Estuarine Bioassessments, Light Attenuation Coefficient, Nitrogen (Total)
NH EST 600030709-01-02	Lamprey River South	Fish Consumption	Polychlorinated biphenyls
NH EST 600030709-01-02	Lamprey River South	Primary Contact Recreation	Chlorophyll-a, Nitrogen (Total)
NH EST 600030709-01-02	Lamprey River South	Shellfishing	Dioxin (including 2,3,7,8-TCDD), Polychlorinated biphenyls
NH IMP 60030708-03	Piscassic River	Aquatic Life	Dissolved oxygen, Dissolved oxygen saturation, pH
NH IMP 60030709-03	Lamprey River - Macallen Dam Impoundment	Aquatic Life	pH
NH RIV 60030708-07	Piscassic River, PWS, CLS-A	Aquatic Life	Dissolved Oxygen, pH
NH RIV 60030709-09	Lamprey River	Aquatic Life	pH

## Hydrology and Hydraulics

### Task 100: Hydrologic Analysis

We already conducted a hydrologic analysis to develop annual and monthly flow duration curves representing flows at the dam (mean and median flows shown in Table 2). Since no flow data are available at the dam, flows were estimated from a combination of the Lamprey River gaged flows (USGS Gage 01073500) and the Oyster River gaged flows (USGS Gage 0107300). The Oyster River flows were prorated by a ratio of the drainage area of the Oyster River gage to the drainage area of the Piscassic River at the confluence with the Lamprey River. Similarly the Lamprey River flows were prorated by a ratio of the drainage at the Lamprey River gage to the drainage area at the dam (excluding the Piscassic River drainage area). Both rivers' estimated flows were then summed to estimate the total flow at the dam.

**Table 2: Estimated Median and Mean Annual and Monthly Flows at Dam**

Statistic	Annual	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Median	199	244	253	545	622	325	139	64	43	37	87	221	293
Average	340	334	363	732	817	431	239	113	87	83	164	320	399

We will evaluate three different 100-year flood flows as follows. First, the Federal Emergency Management Agency (FEMA) published the 100-year flood flow for this section of the river as part of its Flood Insurance Study (FIS). Second, as part of the February 2013 Wright Pierce study, a revised 100-year flood flow was developed. Finally, previous studies have been conducted to estimate the 100-year flood due to climate changes. We have reviewed a recent report titled "Assessing Flood Risk in the Lamprey River Watershed" (Wake, 2013, [http://100yearfloods.org/resources/pdf/Lamprey\\_100YearFloods\\_FINALReport.pdf](http://100yearfloods.org/resources/pdf/Lamprey_100YearFloods_FINALReport.pdf)). This report includes estimates for future 100-year flood flows based on climate change and future development through the year 2100. Estimates included conventional development and low impact development. This study will use the year 2100 with conventional development to estimate the future 100-year flood flow, listed as 17,609 cfs in Table 6 of the final report.

For hydraulic modeling purposes the following flows will be simulated in the model:

- median September flow – reflecting low flow conditions;
- median April 1-June 30 flow to represent the river herring upstream passage season (to be confirmed with NHFGD);
- 100-year flood flows (FEMA's 100-year flood flow, Wright-Pierce's 100-year flood flow, climate change flood flow)

We have included time in this task to research the FEMA and Wright-Pierce 100-year flood flows, as well as develop an understanding on the impact of the dam on the Lamprey-Oyster "flow split" near Route 108.

### Task 110: Hydraulic Analysis

A hydraulic model (HEC-RAS) will be developed; the basis for this model will that developed by Wright-Pierce. The hydraulic model will be a key element of this study, as it will help Project

Partners and townspeople to evaluate the changes in the wetted perimeter of the impoundment under the dam removal and dam modification alternatives. We will supplement the model's cross-sections with the bathymetry and dam survey data and add new cross-sections where appropriate. Additionally, it appears the existing model is not geo-referenced, so the inundation areas cannot be mapped currently. The new model will be geo-referenced, so inundation maps for various simulation flows can be generated.

The hydraulic model requires an upstream and downstream "boundary" condition which sets the water surface elevation at the uppermost and lowermost transects. In the case of the upstream boundary condition on the Lamprey River, we will assume a normal depth of water entering the plunge pool at the upstream extent of the impoundment. The model results will be used to compare the inundation area and water surface elevations (WSEs) throughout the impoundment. If our WSEs do not reasonably match the FEMA FIS results, adjustments to Mannings "n" values will be conducted to calibrate the model. Once the model is calibrated, the following alternatives will be evaluated for the five flow scenarios listed in Task 100:

- Dam Removal Alternative: Remove the spillway, fish ladder and legacy timber-crib dam; leave gate structure and abutments in place, but wall off the arched entrance into the former intake.
- Dam Modification Alternative: Lower the spillway crest 10 feet.

For each of these model runs, the following will be graphically displayed relative to existing conditions:

- For a given flow, the water surface profile along the impoundment will be shown.
- For a given flow, an orthophoto map will be developed to visually depict the change in river width and inundation area.

To simulate the dam removal alternative, a "new" transect representing the native river bed beneath the dam is needed in the hydraulic model. The transect selected to represent the channel bed elevation beneath the dam is critically important, as it could directly impact upstream water levels and velocities. No quantitative information is available on the height or extent of the bedrock at or immediately upstream of Macallen Dam. Historical records, however, reference this area between Macallen Dam and the Rt. 108 Bridge as the "First Falls", indicating there likely are extensive bedrock formations beneath or immediately upstream of the dam. To estimate the bedrock elevation and extent in the area of the dam, we will rely on the sediment probing transects conducted immediately behind the dam, in the area of the legacy dam, and beneath the Rte. 108 Bridge.

Deliverables will include longitudinal profiles and inundation maps (plan-view) of the study area for each of the five flow scenarios (low flow, spring seasonal flow, three 100-yr flow estimates) for each alternative outlined above.



### **Task 120: Water Supply Impacts**

Municipal water and sewer is provided to all Newmarket residents along the impoundment. Additionally, as indicated at the pre-bid meeting Newmarket is no longer considering the river or river-bank filtration as a potential water supply source. Given this, we have assumed that no further assessment of the impacts on water supply withdrawals in Newmarket is needed. However, Durham residents may have private wells located in the general vicinity of the impoundment. For Durham residents bordering the impoundment, we will send them a well survey and request the following: whether they have a private well; approximate distance from the well to the river, type of well (dug well, bedrock well), and the well depth. The premise is that if the well depth is an appreciable distance below the streambed elevation, there should be no impact on water yield. We will use the results of this survey combined with the model-predicted drop in normal water surface elevation to predict whether water levels in any private well may be adversely impacted. The findings will be summarized in the feasibility report.

The town also has existing fire supply standpipes that withdraw from the impoundment (we observed two and up to three or four may exist), but the Town has indicated that they are not used or necessary at this time. We will contact the Town of Durham to determine if they have any fire supply pipes that withdraw water from the impoundment created by the dam.

### **Cultural Resources**

#### **Task 130: Preliminary Area of Potential Effect (APE) Delineation and New Hampshire Department of Historic Resources (NHDHR) Request for Project Review (RPR) Submittal**

As part of the APE delineation, PAL's archaeologist and architectural/industrial historian will conduct a pedestrian survey of the project area to become familiar with the dam structure and adjacent properties where work may occur including dam removal, bank restoration, access routes, and staging areas. The architectural review will include notes and digital photographs of the appearance and dimensions of the dam structure and upstream and downstream river banks. The review will also verify the location of historic properties within the APE identified in the National Register-listed Newmarket Commercial and Industrial District, and identify any potentially significant properties that have not been documented and that appear to be at least 50 years of age, the minimum criteria for listing in the National Register. The archaeological site visit will include a preliminary examination of those areas identified as subject to direct ground-disturbing activities associated with the dam removal, and photographic documentation of the existing conditions of those locations including any evidence of previous ground disturbing activities. The architectural and archeological survey will occur during the impoundment drawdown scheduled to occur in September 2013.

Following the pedestrian survey, PAL will prepare and submit a RPR form for the Macallen Dam Removal Feasibility Project in compliance with NHDHR guidelines. The RPR will include information regarding the project location and proposed undertaking; state and federal agency involvement; the recommended APE for the project; results of the NHDHR site file review

including already-identified historic properties within or adjacent to the recommended APE; and the results of a site visit including photographic documentation of existing conditions and National Register-listed or potentially eligible historic properties. As part of this task, PAL will summarily note any information in the literature discussing migratory fish being present upstream before a dam was located at the "First Falls."

#### **Task 140: Fish Passage**

Absent the dam, the ability for fish to move upstream is a function of the bedrock geometry beneath the dam, which could serve as a barrier to some or all migratory species. As noted above, the sediment depth will be probed to refusal along the upstream face of the dam. This transect will represent the transect geometry beneath the dam. We will compare this transect with the transect surveyed just below the dam to determine the approximate vertical rise fish would need to negotiate. We will determine if there are any vertical or velocity barriers that could preclude certain migratory fish from moving into the Lamprey River. We will compare swimming speeds and/or jumping abilities of eel, river herring, lamprey, salmon and shad to determine whether fish may be able to negotiate the "First Falls" absent the dam. We will assume no modification or removal of the bedrock beneath the dam to facilitate passage.

#### **Task 150: Evaluate Structural Impacts to the Veteran's Bridge and Other Infrastructure**

Hoyle, Tanner & Associates, Inc. (HTA) will conduct work relative to the potential effects of dam removal on adjacent and upstream infrastructure features, namely:

- The Rte. 108 Bridge;
- Retaining Walls and Foundations. There are several retaining walls and building foundations within close proximity to the Route 108 Bridge. Access to the lower portions of adjacent buildings will be requested in addition to river side evaluations. Plans or other documentation are not expected to be available for most of these foundations. Therefore, limited assumptions will have to be made with regard to the dam removal on these features.

The effort will consist of a one-day inspection by a structural engineer of above-ground structures during the September 2013 drawdown. Upon completion of the site visit, HTA will provide a brief memo summarizing their findings along with photographs. The memo will include HTA's professional judgment of what potential structural issues could occur if the spillway crest is lowered 10 feet or removed entirely. The memo will not include alternatives to protect the bridge, building and retaining wall foundations. Assumptions include:

- HTA does not propose underwater inspections and it is anticipated all access will be by ladder, and inspections can be performed using waders or a small boat or kayak.
- No field measurements will be taken.

- Inspections of building foundations will be from the exterior only unless the town can assist with coordinating access to buildings within the study area.

#### **Task 160: Recreational Usage**

Based on our weekend preliminary work, the impoundment appears to be heavily used on summer weekends and there are numerous docks along the impoundment. We will rely on the hydraulic model to estimate the reduction of river width and depth under the dam modification and dam removal alternatives. This information will help inform the impact on current recreation. For example, based on our preliminary analysis, it appears that many of the docks and the existing boat ramp would be directly impacted if the spillway crest is removed or lowered. We will summarize the following in the feasibility report: a) anecdotally document current summer recreation use based on our previous on-water survey, b) evaluate the potential impact on recreation due to dam modification and dam removal; and c) identify potential new recreational opportunities due to dam modification and dam removal. Note that the recreation “assessment” will not be quantitative; it will be based on field observation, anecdotal information and hydraulic modeling results (changes in river width and depth above the dam).

#### **Task 170: Social Issues**

This task entails identifying what social issues may arise as part of the dam modification and dam removal process. These may include items such as property value impacts, socio-economic or political issues. This task does not include assessing the costs or impacts of these issues. Gomez and Sullivan will simply make the Town and Project Partners aware of them.

### **Dam Modification and Dam Removal Alternatives and Impact Analysis**

#### **Task 180: Develop Cost Estimate for Dam Removal**

An order of magnitude cost estimate will be developed for the dam removal alternative. The cost estimate will not include detailed quantity take-offs, but will include costs associated with: additional feasibility study work if deemed necessary, permitting, engineering, design, technical specifications and bid documents. The cost estimate will not include costs associated with structural stabilization measures that may be required if the spillway crest is lowered 10 feet or entirely removed. We have assumed that the cost of dam modification will be obtained from the Wright Pierce report.

#### **Task 190: Visual Rendering**

We will develop one photographic rendering with the dam removed (replaced with some type of bedrock) from the viewpoint of standing on the footbridge and looking upstream.



## **Outreach and Coordination Meetings**

### **Task 200: Progress Report Meetings (6)**

We will coordinate with Project Partners throughout the project and have budgeted for six progress report meetings in Newmarket. We have included time to prepare agendas, attend, and develop minutes. The Project Manager will attend all six progress report meetings, while the Project Director will attend three progress report meetings.

### **Task 210: Public Meetings (3)**

Our public outreach plan consists of holding a public meeting at the onset of the project to describe the goals, approach, and tasks via a PowerPoint presentation. The presentation will be at a level understandable to the layperson, yet technical enough to convey the intent and end product of the feasibility study. We will solicit public input on our approach and listen to concerns or issues. It is important to convey the message that Project Partners and the consultant are open to communications and are available to answer questions throughout the study. It is critical to stress at this meeting that only a feasibility study is being conducted and that no decisions have been made relative to the dam's fate. The town has made it clear they are just seeking the facts, such that the town can make an informed decision. As noted at the beginning of the scope, it is also extremely important that the findings of the Wright Pierce report be conveyed to the Town Council, other government bodies in Newmarket as well as interested Newmarket residents.

Prior to the first public meeting, a contact list will be developed including names, addresses, and email addresses (if available) of all property owners abutting the project area, Project Partners, Newmarket's Conservation Commission, Public Works, Planning, Parks and Recreation, Historical Society, and others. Additionally, we will make a concerted effort to reach out to the town and residents of Durham, who abut the impoundment. We recommend the following protocol prior to each of the three public meetings:

- Send letters to all parties on the contact list notifying them of the meeting purpose, date, and location.
- Place a notice on the town's website and submit press releases in Seacoastonline and the Portsmouth Herald (we will develop the press release, but have assumed the town will submit it to newspaper outlets and pay for associated fees).

PowerPoint presentations will be prepared for each meeting, circulated in advance of the meeting to Project Partners, and updated as requested. Deliverables include: a) following the outreach protocols listed above, b) developing agendas, c) preparing PowerPoint Presentations, and d) attending the meetings.

## **Feasibility and Impact Analysis Report Preparation**

### **Task 220: Draft Feasibility Report and Matrix Identifying Dam Removal Consequences**

A draft feasibility report will be developed summarizing the findings and recommendations for the project. Electronic copies of the draft report will be sent to Project Partners for review and comment. This report will be written as a factual document and is not intended to sway the audience into seeking a particular alternative (dam modification, dam removal).

As part of the report, a matrix will be developed for the dam modification and dam removal alternatives. The matrix will identify the impact associated with each alternative (dam modification, dam removal) on ecological resources (water quality, fish passage, fish habitat, wetlands/wildlife), recreation, and infrastructure (wells, bridge scour, flooding, sediment). Note that relative to structural impacts, the feasibility report will reference the summary memo in Task 150.

#### **Task 230: Final Feasibility Report**

We will review the comments on the Draft Feasibility Report and incorporate changes, where appropriate, into a Final Feasibility Report. Six paper copies and up to 10 CDs of the final report will be developed. An electronic PDF version will also be generated for the town to post on its website.

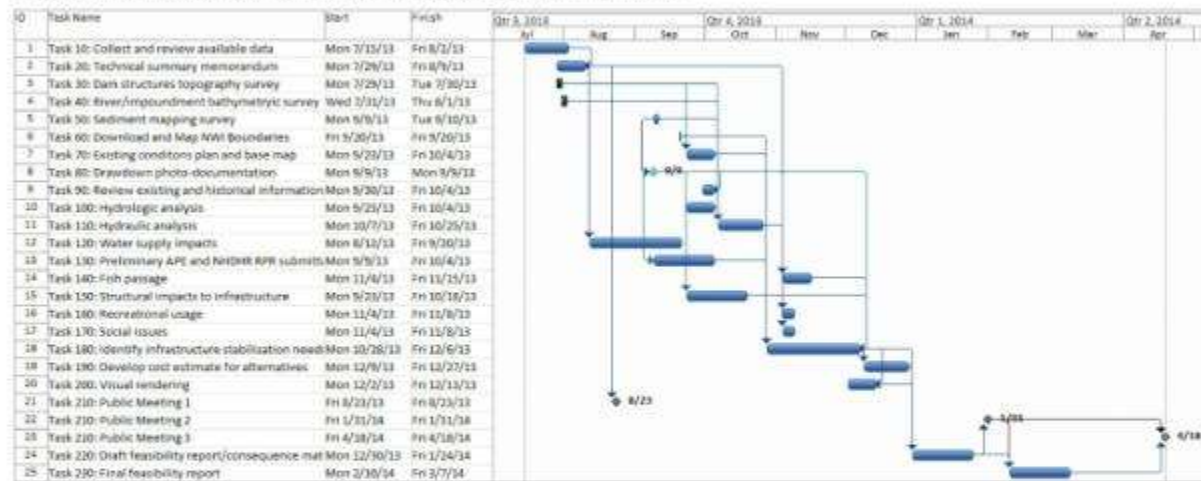
### **Project Management & Communication**

#### **Task 700: Project Management & Communication**

Coordination with Project Partners will occur on a regular basis. In addition to communicating with Project Partners, we have budgeted for periodic updates (via email) to summarize the status of the project. Other administration costs include reviewing invoices, and managing the budget, scope and schedule.

## 2.0 Schedule

Based on our discussions with Project Partners, we have assumed a start date of July 15. Ideally, we would like to conduct field work (sediment thickness measurements, foundation/building inspections, and surveys) when the impoundment is drawn down following Labor Day, with a preliminary drawdown begin date of 9/5/2013. Our proposed schedule is shown below.



### 3.0 Cost Estimate

As discussed in the April 11 meeting, the Town is expected to have a working budget of approximately \$80,000 to \$85,000. This is less than our original proposal estimated for a total cost. We have adjusted our scope and cost estimate based on our April 11 and May 1 discussions. **Additionally, this section has been revised to reflect a 5% direct markup in costs, rather than a 10% markup as originally calculated. These changes are marked in red.**

Task No.	Task Description	Engineer V	Engineer IV	Engineer III	Scientist III	Engineer II	Regulatory Specialist	Scientist I	Admin Asst	Payroll Related Fee	Direct Expenses	Subconsultants	Total Estimated Base Fee
		\$161.00	\$147.00	\$135.00	\$106.00	\$95.00	\$84.00	\$67.00	\$63.00			PA, Hoyle, Turner & Associates	
<b>Existing Data Collection and Review</b>													
10	Collect and review available data		2			4		2		\$800	\$40		\$840
20	Technical summary memorandum		4			12				\$1,728	\$45		\$1,773
<b>Field Survey and Base Mapping</b>													
30	Dam structures topography survey					26	24			\$4,916	\$190		\$5,106
40	River/impoundment bathymetric survey					28		20		\$3,920	\$840		\$4,960
50	Sediment mapping survey						12	16		\$2,262	\$198		\$2,460
60	Download and Map NWI Boundaries				2					\$212	\$0		\$212
70	Existing conditions plan and base map		2			4	16			\$2,178	\$45		\$2,223
80	Dredged photo documentation					8				\$760	\$95		\$855
<b>Sediment Evaluation</b>													
90	Review existing and historical information				4			6		\$928	\$0		\$928
<b>Hydrology and Hydraulic Analysis</b>													
100	Hydrologic analysis					2				\$190	\$0		\$190
110	Hydraulic analysis		4			40				\$4,368	\$95		\$4,463
120	Water supply impacts		1			2		6		\$841	\$95		\$936
<b>Cultural Resources</b>													
130	Preliminary APE and NICHRS RPR submital					1				\$85	\$0	\$5,815	\$5,900
<b>Other Issues of Importance</b>													
140	Fish passage				2	4		4		\$844	\$0		\$844
150	Structural impacts to infrastructure					2				\$190	\$0	\$4,630	\$5,020
160	Recreational usage					2				\$190	\$0		\$190
170	Social issues					2				\$190	\$0		\$190
<b>Dam Deconstruction Alternatives and Impact Analysis</b>													
180	Develop cost estimate for alternatives	5	4	30		16	2			\$7,904	\$42		\$7,946
190	Visual rendering						16			\$1,504	\$95		\$1,599
<b>Outreach and Coordination Meetings</b>													
200	Progress report meetings (5)		20			48			4	\$7,752	\$375		\$8,127
210	Public meetings (3)		24			24			8	\$6,312	\$775		\$6,987
<b>Feasibility and Impact Analysis Report Preparation</b>													
220	Draft feasibility report/consequence matrix	4	12	8	4	64		2	1	\$10,181	\$110		\$10,291
230	Final feasibility report	2	4	4	1	20		1	1	\$3,580	\$110		\$3,690
<b>Project Management &amp; Communication</b>													
790	Project management and communication		12			40			12	\$6,320	\$95		\$6,415
<b>Total Project Cost Estimate</b>		14	89	44	13	351	70	63	28	\$98,187	\$2,847	\$5,815	\$105,859

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## **4.0 Terms and Conditions and Hourly Rate Sheet**

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Gomez and Sullivan Engineers, P.C. proposes to undertake the proposed services on the basis of hourly billing rates plus direct costs, for tasks authorized by the Town of Newmarket. Hourly billing rates include actual direct salary payments to all personnel for the time directly engaged on the project; plus payroll charges including vacation, sick leave and holiday pay, unemployment and payroll taxes, social security contributions, workman's compensation insurance, retirement benefits, medical insurance, group insurance benefits, general overhead and profit. The hourly billing rates are included on the following page.

Direct costs include costs which are directly applicable to the work, such as transportation and subsistence expense on travel in the interest of work, long distance telephone, reproductions, topographic maps, special insurance, model and laboratory testing, aerial and ground surveying, subsurface exploration, and subcontractors billed through Gomez and Sullivan. Direct costs will be assessed a 5% service charge when handled by Gomez and Sullivan.

Invoices will be submitted to the Town of Newmarket monthly. Payment will be due within thirty days of the invoice date. Payments not received within thirty days will be subject to an interest charge of 1.5 percent per month.

It should be noted that estimates for fieldwork assume that scientifically useful data can be collected in a safe and efficient manner. The estimate does not include any contingencies for factors beyond Gomez and Sullivan's control, such as unanticipated foul weather, high river flows, etc. Any costs that Gomez and Sullivan incurs because of unanticipated/uncontrollable conditions will be billed to the Town of Newmarket.

**GOMEZ AND SULLIVAN ENGINEERS, P.C.**  
**May 1, 2012 through June 30, 2014**  
**Hourly Billing Rate Schedule**

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<b><u>Classification</u></b>	<b><u>Hourly Billing Rates</u><sup>(1)</sup></b>
Principal	\$185.00/hour
Senior Engineer (V)	\$161.00/hour
Engineer (IV)	\$147.00/hour
Engineer (III)	\$135.00/hour
Engineer (IIIB)	\$113.00/hour
Project Engineer (II)	\$95.00/hour
Junior Engineer (I)	\$89.00/hour
Senior Scientist (IV)	\$158.00/hour
Scientist (III)	\$106.00/hour
Scientist (II)	\$90.00/hour
Junior Scientist (I)*	\$63.00/hour
GIS/Program Manager	\$158.00/hour
Regulatory Specialist	\$94.00/hour
GIS Analyst (II)*	\$81.00/hour
GIS Analyst (I)*	\$63.00/hour
Licensing Coordinator	\$83.00/hour
Project Assistant*	\$73.00/hour
Administrative Assistant*	\$63.00/hour
Senior Technician (III)*	\$96.00/hour
Technician (II)*	\$75.00/hour
Junior Technician (I)*	\$55.00/hour
Field Technician*	\$47.00/hour
Word Processor/Secretarial*	\$56.00/hour

Notes:

- (1) Hourly Billing Rates include labor, general and administrative overhead and profit.
- (2) Overtime for non-exempt employees (classifications identified with an asterisk\*) will be billed at 1.25 times rates listed. All other employees billed at listed rates for overtime.
- (3) Direct expenses, Including Subconsultants, billed at Cost plus 10%.
- (4) These billing rates will remain in effect through June 30, 2014, at which time they may be adjusted to reflect changing business conditions.

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***Confidential: The information contained on this page is confidential and proprietary. It shall not be released or otherwise made available to any third party without the express written consent of Gomez and Sullivan Engineers, P.C.***

## **EXHIBIT B**

### **General Terms and Conditions**

**GOMEZ AND SULLIVAN ENGINEERS, P.C.**  
*GENERAL TERMS AND CONDITIONS*

1. **PURPOSE:** These General Terms and Conditions when combined with a Proposal are intended to form a complete Agreement between Gomez and Sullivan Engineers, P.C. (Gomez and Sullivan), a New York Corporation, and the Client to whom the Proposal is addressed. When Gomez and Sullivan's signed Proposal has been accepted by the Client, the resulting Agreement shall take the place of all other agreements and representations concerning the subject of the Proposal. This Agreement may only be amended in writing signed by both parties. Terms and Conditions of any purchase order issued by the Client shall not be part of this Agreement unless separately signed by Gomez and Sullivan.
2. **RELATIONSHIP OF PARTIES:** Gomez and Sullivan shall serve as Client's professional consultant. The relationship is that of a buyer and seller of professional services and it is understood that the parties have not entered into any joint venture or partnership with the other. Gomez and Sullivan is an independent consultant, not an agent of Client, and shall be responsible for the means and methods used in performing services under this Agreement.
3. **CLIENT'S RESPONSIBILITIES:** Client shall provide the following to Gomez and Sullivan in support of the project:
  - a) Promptly provide information required for the performance of its services,
  - b) Provide Gomez and Sullivan personnel access to the work site for the performance of its services,
  - c) Designate a Client's Representative with the authority to transmit instructions, receive information, authorize payment for services, and define Client's policies concerning this Agreement,
  - d) Promptly notify Gomez and Sullivan of any defect in Gomez and Sullivan's services as soon as Client becomes aware of such defect, and
  - e) Prior to commencement of the work, furnish Gomez and Sullivan with any special design or construction standards, which Client may require Gomez and Sullivan to follow.
4. **ENGINEER'S RESPONSIBILITIES:** Gomez and Sullivan will perform the services outlined in the Agreement with that degree of reasonable care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances.

Services rendered under this Agreement by Gomez and Sullivan will not include supervision of services provided to the Client by others, including, but not limited to, Client's representatives, agents, employees, construction managers, or contractors.

Gomez and Sullivan shall not have control or be in charge of and shall not be responsible for the means, methods, techniques, scheduling, sequences or procedures of construction, or the safety, safety precautions or programs of the Client, the construction contractor, other contractors or subcontractors, or any other entity or person(s) performing any work or services on the project.



Gomez and Sullivan shall not be liable for any losses resulting from deficiencies in its services if those deficiencies arise from a cause beyond Gomez and Sullivan's reasonable control. Gomez and Sullivan may use Client supplied information, requirements, reports, data, surveys and instructions in performing its services and is entitled to rely on the accuracy and completeness thereof.

5. **INSURANCE:** Consultant agrees to procure and maintain, until final acceptance of the services to be performed hereunder, insurance of the kinds and amount set forth below. Certificates of said insurance shall be provided upon request, and no reduction of limits or cancellations shall occur without ten (10) days prior notice thereof. The minimum limits of coverage to be provided by the Consultant under this Agreement follows:

- |    |  |  |
|----|--|--|
| a. | <u>Workers' Compensation</u>   | Statutory Limit  |
| b. | <u>Employer's Liability</u>  | \$100,000 each accident<br>\$500,000 disease/policy limit<br>\$100,000 disease/each employee |
| c. | <u>Comprehensive General Liability</u><br>(including Broad form coverage, Premises Liability and Contractual Liability)<br>Bodily Injury and Property Damage Combined: | \$1,000,000 per occurrence<br>\$2,000,000 aggregate  |
|    | Comprehensive Business Automobile Liability (including non-owned auto liability)<br>Bodily Injury and Property Damage Combined   | \$1,000,000  |
| d. | <u>Professional Liability Insurance</u>  | \$1,000,000 each claim<br>\$1,000,000 aggregate  |
| c. | <u>Workers' Compensation</u>   | Statutory Limit  |
| d. | <u>Employer's Liability</u>  | \$100,000 each accident<br>\$500,000 disease/policy limit<br>\$100,000 disease/each employee |

6. **PAYMENT:** In consideration of Gomez and Sullivan's performance of the proposed services, Client shall pay Gomez and Sullivan as stated in the Agreement. Client agrees to pay promptly Gomez and Sullivan's fees and expenses as submitted on monthly invoices. If any balance remains unpaid thirty (30) days from the date of the invoice, Client shall pay interest on the unpaid balance at the rate of one and one half percent (1½ %) per month from said forty-fifth (45<sup>th</sup>) day.

7. **ADDITIONAL SERVICES:** Gomez and Sullivan shall perform such additional services in conjunction with the project as requested by the Client and agreed to in writing by both parties. Payment for such additional services will be either on a time and material basis in accordance with the Billing Rate Schedule included in the Agreement or alternative method established by prior written agreement of both parties. Service and compensation modifications so authorized shall be documented by a written change order or amendment to the Agreement signed by both parties.
8. **SHOP DRAWING/SUBMITTAL REVIEW:** When authorized by Client, Gomez and Sullivan shall review and approve, or take other appropriate action on contractor submittals, such as shop drawings, product descriptions, samples and other data, but only for conformance with the design concept and the information expressed in the contract documents. This review shall not include checking the accuracy or completeness of details, such as quantities, dimensions, weights or gauges, fabrication processes, construction methods, coordination of the work with other trades or construction safety precaution, all of which are the sole responsibility of the contractor.
9. **OWNERSHIP OF DOCUMENTS:** Gomez and Sullivan acknowledges that all documents prepared by Gomez and Sullivan are the property of the Client including, but not limited to, all reports, original drawings, work sheets, field notes, estimates and other data. These materials shall remain the property of the Client, and shall be transmitted to the Owner in a clean, and orderly process during the project and also on demand in a print and electronic format suitable to the Client's use; however, these may be left in the possession of Gomez and Sullivan at the client's discretion. Gomez and Sullivan shall have the right to retain copies of all documents and drawings for its files.

The parties understand and agree that the furnishing and/or exchange of electronic files/data potentially pose special considerations (including the ease of changing data and difficulty in later determining the exact contents of the furnished file, etc.). Therefore, where plans, drawings, or documents are delivered to Client on electronic media, it is agreed that the accompanying hard copy of such plans, drawings or documents is the actual contract deliverable and that the electronic files are provided for Client's convenience only. Information presented on the hard copy version shall take precedence over the electronic version.

10. **REUSE OF DOCUMENTS:** All documents including drawings, electronic files, and specifications furnished by Gomez and Sullivan pursuant to this Agreement are intended for use on the project covered by this Agreement. In no event shall Gomez and Sullivan be liable for indirect or consequential damages as a result of the Client's use or reuse of such documents, including electronic files on the project outside of the scope covered by this Agreement.
11. **COST OPINIONS:** Opinions of probable construction cost or project economic evaluations prepared by Gomez and Sullivan will be on the basis of its experience and judgment as a design professional familiar with the industry. Gomez and Sullivan has no control over market conditions, construction methods or competitive conditions and therefore cannot

represent that actual bids, negotiated prices, ultimate construction costs or project economics will not vary from these opinions.

12. **CHANGES AND AMENDMENT:** Client may propose, by written change order or amendment, to make changes in the requirements, amount of services, or time schedule. Any such changes must be agreed to by both parties.
13. **TERMINATION OR SUSPENSION:** The Client shall have the right at any time for any reason whatsoever to interrupt or terminate any part of or all of the work required of Gomez and Sullivan under this Agreement, with a seven (7) day written notice of such interruption or termination transmitted to Gomez and Sullivan by the Client. In the event of termination of any part of or all of this Agreement, without fault on the part of Gomez and Sullivan, Gomez and Sullivan shall be entitled to compensation for all work performed to the satisfaction of the Client, and pursuant to this Agreement. In order that Gomez and Sullivan shall receive payment under termination notice of any part of the work, all plans, drawings, tracings, field notes, estimates, specifications, proposals, sketches, diagrams, and calculations, together with all other materials and data collected or prepared in connection with the project shall be transmitted to the Client in a form acceptable to the Client through the date of termination.

If Gomez and Sullivan terminates for Client's breach, Gomez and Sullivan shall be paid its reasonable and necessary termination costs which may include demobilization (personnel, equipment, office, etc.) as well as costs associated with terminating contracts, leases and other obligations incurred by Gomez and Sullivan in reliance upon this Agreement.

Gomez and Sullivan shall not be liable to the Client for losses resulting from Gomez and Sullivan's termination or suspension caused by Client's non-payment or other material breach of this Agreement.

14. **GOVERNING LAW:** This Agreement shall be governed by the laws of the state of New Hampshire, provided that nothing contained in the Agreement shall be interpreted in such a way as to render the Agreement unenforceable under any law of the United States or the law of the place in which the Client is located.
15. **INDEMNIFICATION:** To the fullest extent permitted by law, Gomez and Sullivan shall indemnify and hold harmless the Client and its officers and employees from any and all damages, liabilities or costs, including reasonable attorney fees and costs of defense, to the extent caused by the negligent acts, errors or omissions of Gomez and Sullivan, or anyone for whom Gomez and Sullivan is legally liable, in the performance of professional services under this Agreement.

To the fullest extent permitted by law, Client shall indemnify and hold harmless Gomez and Sullivan and its officers, employees and subconsultants from any and all damages, liabilities or costs, including reasonable attorney fees and costs of defense, to the extent caused by the negligent acts, error or omissions of the Client and those of its contractors, subcontractors, consultants or anyone for whom Client is legally liable, and arising from the project that is the subject of this Agreement.

Gomez and Sullivan is not obligated to indemnify Client in any manner whatsoever for Client's own negligence.

16. **HAZARDOUS SUBSTANCES:** It is acknowledged by Client that Gomez and Sullivan's scope of services does not include any services related to asbestos or hazardous or toxic substances.
17. **FORCE MAJEURE:** Neither Client nor Gomez and Sullivan shall be liable for any fault or delay caused by any contingency beyond their control including, but not limited to acts of God, wars, strikes, walkouts, fires, natural calamities, or demands or requirements of government agencies.
18. **PATENTS:** Unless specifically included in the Agreement, Gomez and Sullivan shall not conduct patent searches in connection with its services under this Agreement and assumes no responsibility for any patent or copyright infringement arising therefrom. Nothing in this Agreement shall be construed as a warranty, guarantee, or representation that anything made, used or sold arising out the services performed under this Agreement will be free from infringement of patents or copyrights.
19. **ACCESS AND PERMITS:** Client shall arrange for Gomez and Sullivan to enter upon public and private property and obtain all necessary approvals and permits required from governmental authorities having jurisdiction over the project. Client shall pay costs incident to any effort by Gomez and Sullivan toward assisting Client in such access, permits, or approvals, if Gomez and Sullivan performs such services.
20. **SUBCONTRACTS:** Gomez and Sullivan may subcontract portions of the services, but each subconsultant/subcontractor must be approved by Client in writing. Subconsultants/subcontractors mentioned in the Proposal are deemed to be approved by the Client.
21. **TESTIMONY:** If Gomez and Sullivan staff are required by Client to provide testimony, answer questions, or provide information in preparation for or at a trial, hearing, examination, deposition, or any other proceeding arising out of the services provided under this Agreement and Gomez and Sullivan is not a party to the proceedings, Gomez and Sullivan will be compensated for such services on a time and materials basis based on a mutually agreeable Hourly Rate Schedule. Testimony rates are not charged for normal meetings with regulatory agencies.
22. **ASSIGNMENT:** Neither party shall assign its rights, interests or obligations under this Agreement without prior written consent from the other party; but such consent shall not unreasonably be withheld.
23. **NO WAIVER:** The failure of either party to enforce a provision of this Agreement shall not prevent that party from later enforcing it or from pursuing remedies that may be available for breach of the provision.

24. **SEVERABILITY OF INVALID PROVISIONS:** If any provision of the Agreement shall be held to contravene or be invalid under the laws of any particular state, country, or jurisdiction where used, such contravention shall not invalidate the entire Agreement, but it shall be construed as if not containing the particular provision or provisions held to be invalid in the particular state, country, or jurisdiction, and the rights or obligations of the parties hereto shall be construed and enforced accordingly.
25. **DISPUTE RESOLUTION:** In the event of a dispute relating to or arising out of this Agreement, the parties shall meet and confer in Newmarket, N.H. and negotiate in good faith in attempt to resolve the dispute. In the event the parties are unable to resolve the dispute after such good faith negotiation, the parties agree that such unresolved dispute(s) be submitted to non-binding mediation unless the parties mutually agree otherwise.
26. **TIME FOR ACCEPTANCE:** Gomez and Sullivan's Proposal shall remain firm for a period of sixty (60) days from the Proposal submittal date unless another period is specified in the Proposal or the time is extended by Gomez and Sullivan.