City of Palo Alto
City Council Staff Report

Summary Title: Energy/Compost Facility Recommendations

Title: Approval of Amendment No.1 to Contract C11136602 with Alternative Resources, Inc. in the Amount of $29,700 for a Total Not to Exceed Amount of $227,758 for Assistance in Developing a Process and Timeline for Energy/Compost Facility Consideration; Approval of Contract C12143502 with Golder Associates, Inc. in the Amount of $193,713 for a Total Not to Exceed Amount of $213,113 for Final Landfill Cap Design and Landfill Capping-Related Services (CIP RF-11001); and Temporary Suspension of Landfill Capping and Compost Termination to Allow for the Establishment of a Process and Timeline for Consideration of an Energy/Compost Facility

From: City Manager

Lead Department: Public Works

Recommendation
Staff recommends that Council:

1. Approve and authorize the City Manager or his designee to execute the attached contract Amendment No. 1 to Contract No. C11136602 (Attachment A) with Alternative Resources Inc., (ARI) in the amount of $29,700 for assisting the City in generating a process and timeline for considering an Energy/Compost Facility on the 10-acre site made available by Measure E, for a total contract amount of $227,458;
2. Approve and authorize the City Manager or his designee to execute the attached contract (Attachment B) with Golder Associates, Inc. (Golder) in the amount of $193,713 for the final landfill cap design and $19,400 for additional services for a total contract amount of $213,113;
3. Direct staff to continue dialogue with regulatory agencies to obtain approval for a postponement of final capping of the landfill for one construction season (from 2012 to 2013) so that Council can retain all options while the process and timeline for considering an Energy/Compost Facility is developed;
4. Direct staff to continue operating the City’s existing aerobic windrow composting operation on the landfill instead of closing the composting facility and diverting yard trimmings to the Sunnyvale SMaRT® Station while the process and timeline for considering an Energy/Compost Facility is developed; and
5. Direct staff to return to Council in approximately three months to present the process and timeline for considering an Energy/Compost Facility and to obtain further Council direction on the landfill closure and existing composting operation.

**Executive Summary**

This staff report contains recommendations pertaining to the City’s consideration of a potential Compost/Energy Facility, final capping and closure of the Palo Alto landfill, and short-term continued operation of the City’s composting operation at the landfill. Final capping and closure of the landfill, as well as closure of the composting operation, were scheduled to occur in calendar year 2012.

The passage of Measure E in November 2011, which undedicated from parkland a 10-acre parcel of the landfill scheduled for closure, allows the City to carefully consider an Energy/Compost Facility on the 10-acre parcel or some portion thereof. Staff’s recommendations are intended to preserve the City’s options and to avoid unnecessary expenditures while a process and timeline for considering an Energy/Compost Facility are developed.

Staff recommends that 1) a contract amendment with Alternative Resources, Inc. (ARI) be approved to assist in development of the plan and timeline for considering an Energy/Compost Facility; 2) capping and final closure of the landfill be delayed for one construction season; 3) a contract with Golder Associates (Golder) be approved to complete certain closure-related tasks immediately and to allow closure to proceed in calendar year 2012 if necessary; and 4) the existing composting operation be continued in the short term at its current location. Staff intends to return to Council in approximately three months to present the process and timeline developed with the assistance of ARI and to obtain further Council direction on the landfill and closure and existing composting operation.

**Background**

**ARI Contract Amendment No. 1**

On April 5, 2010, Council directed staff to initiate a feasibility study for an Energy/Compost Facility in Palo Alto. Council approved a contract with ARI to conduct the study (CMR:333:10) on August 2, 2010. In September 2011, a Final Feasibility Report was presented to Council. The Feasibility Report recommended that if the site at Byxbee Park becomes available through the passage of Measure E, the City should take further actions to consider anaerobic digestion and other technologies for managing the City’s food scraps, yard trimmings, and biosolids at the site.

In November 2011, Palo Alto voters passed Measure E, which removes a 10-acre parcel of land adjacent to the wastewater treatment plant from dedication as parkland for the limited use as an Energy/Compost Facility. Approximately 8 of this 10-acre parcel is located on the Palo Alto landfill. A contract amendment with ARI is being proposed to
assist the City with developing a plan and timeline for consideration of an Energy/Compost Facility on the 10-acre parcel or a portion thereof.

**Landfill Closure and Golder Associates Inc. Contract**

The Palo Alto Landfill is comprised of 126-acres and is divided into four Phases - I, IIA, IIB, and IIC. Phase I known as Byxbee Park was capped and opened to park users in 1991. Phase IIA was capped in 1992 and Phase IIB was capped in 2000. In the summer of 2011, all of Phase IIA and a large portion of Phase IIB were opened to park users after the environmental control systems were buried and additional clean soil was brought in to bring the phases to final design grades. In November of 2011, an additional 7 acres of Phase IIB was opened to park users. Approximately 2 acres of Phase IIB is being used to stockpile a vegetative soil mixture. The remaining portion of Phase IIB is expected to be open to the public in 2012.

Phase IIC is the final phase of the landfill to be closed. It is 51 acres in size and includes the open windrow aerobic composting operation, Palo Alto Recycling Center (set to close February 1, 2012), former equipment maintenance facility, and the landfill office, scale, and tollbooth.

The last remaining section of Phase IIC accepting refuse reached capacity in July 2011 and the landfill has officially stopped accepting any more refuse. The landfill has continued to accept yard trimmings from the contract hauler (residential curbside collection), City crews, and City tree trimming contractors so compost could be made and added to soil to produce a vegetative soil layer. The landfill also started accepting clean soil to bring settled areas of Phase IIC up to the final design grades and as an additive for the vegetative soil layer. The vegetative soil layer will be used during capping and is being stockpiled on a small portion of Phase IIB and on Phase IIC. Capping of Phase IIC was originally scheduled to begin during the 2012 construction season. Once capped, all areas of Phase IIB and IIC can be opened to park users with the exception of the 10-acre parcel described in Measure E.

Before Phase IIC can be capped and opened to the public, final construction plans and specifications must be prepared by an engineering firm specializing in landfill closures. The engineering firm, Golder, was selected to prepare the final construction documents as well as other closure activities for Phase IIC. This professional services contract C12143502 is included as Attachment B.

**Composting Operation**

The City operates an open windrow aerobic composting facility at the landfill (on top of Phase IIC). The composting facility receives yard trimmings from the City’s solid waste hauler, from City crews generating yard trimmings, and from City tree trimming contractors. Public self-haul yard trimmings have not been accepted since the landfill stopped accepting refuse in July 2011. Seven to ten trucks deliver approximately 70 tons of compostable material five days per week. The yard trimmings are ground and
placed into windrows, watered and turned so that aerobic digestion can be accomplished. After approximately six weeks the compost is finished and the material is screened. The screened finished compost is then mixed with clean soil and stockpiled for use as the vegetative soil layer that will be used to cover the Phase IIC cap. The composting operation had been scheduled to end in early 2012 once enough finished compost had been generated for the vegetative layer.

Discussion
ARI Contract Amendment No. 1
Staff recommends that a contract amendment with ARI be approved to allow ARI to assist the City in developing a process and timeline following the passage of Measure E which removes from dedication as parkland a 10-acre parcel of land located in Byxbee Park for the exclusive purpose of building a processing facility for the City’s organic wastes: food scraps, yard trimmings, and biosolids. The initial ARI contract funding of $197,758 was used to complete the Energy/Compost Feasibility Study. The next step in considering an Energy/Compost Facility is to develop a detailed plan and timeline for evaluating the technologies, environmental impacts, funding mechanisms and technology providers associated with the potential project. The process and timeline will then serve as a roadmap throughout the evaluation process. This ARI contract amendment in the amount of $29,700 will enable ARI to assist the City in preparing the plan and timeline. This contract amendment also provides funding for the consultant to answer some remaining questions and concerns about the Feasibility Study. The funds budgeted for this purpose in the initial contract were used earlier in the process to answer concerns and make revisions precipitated by the extraordinary amount of public comment received. If all of the contract amendment money is not needed, it will not be spent. It is anticipated that development of the process and timeline will take approximately three months. Staff intends to return to Council at that time to review the plan and timeline and to obtain further Council direction before beginning implementation of the plan.

Landfill Closure and Golder Associates Inc. Contract
The remaining uncapped 51 acres of the landfill had been scheduled to be graded and capped during the 2012 construction season, which extends through the Fall of 2012. In accordance with the Measure E amendments to the Comprehensive Plan and Baylands Master Plan, staff is recommending that Council direct staff to contact regulatory agencies to apply for the postponement of the capping for one construction season. A postponement for one construction season allows time for staff to develop and begin implementing the process and timeline for considering an Energy/Compost Facility. Installing the cap while still considering options for an Energy/Compost Facility would substantially increase the future cost to build the Facility. Refuse excavated from the 10-acre site to create a usable pad for the Facility would need to be relocated to the remaining 41 acres of Phase IIC of the landfill or exported to an off-site landfill. Relocation of refuse to the remainder of Phase IIC would require that those areas be regraded and have a new cap installed, in addition to changes to the leachate and
landfill gas collection systems. Exporting the excavated refuse to another landfill would involve significant transportation and tip fee costs. Staff is developing cost estimates for several different potential Energy/Compost Facility pad sizes and configurations. Preliminary estimates indicate that the increased cost to build an Energy/Compost Facility after the landfill had already been capped could be several million dollars.

Postponement of the landfill closure can be allowed if all three of the oversight agencies with jurisdiction over the landfill closure approve the City’s request. These three agencies are the California Regional Water Quality Control Board (RWQCB), the California Department of Resources Recycling and Recovery (CalRecycle), and the County of Santa Clara, Department of Environmental Health (Local Enforcement Agency or “LEA”). Preliminary conversations between City staff and the agencies indicate that postponement could be acceptable. The State Lands Commission may also need to be consulted.

In the event the RWQCB, CalRecycle or the LEA does not approve postponing the closure of the landfill, a professional services contract would be needed immediately to provide final construction plans and specifications for the landfill closure. Certain tasks in such a contract can be performed now, regardless of when capping occurs.

The scope of the Golder contract includes investigating and characterizing the extent and quality of the low-permeability soil in the 0.1 acre former landfill gas-to-energy (Cogeneration) Facility, located on the North-Western corner of the landfill. The Cogeneration Facility closed in 2004 and has been used to store equipment, an oil lube shed, and has acted as a maintenance bay to service landfill heavy equipment. The Golder contract scope also includes, assisting the City by answering technical questions and/or design conflicts, performing a CEQA analysis of the closure construction impacts, performing facility closure sampling and analytical testing of soils at the Cogeneration and Recycling Center, providing construction quality assurance (CQA) oversight, and preparing a CQA Summary Report.

If closure of the landfill is postponed, staff will only proceed with those portions of the scope of work that need to take place in the same manner regardless of whether a Compost/Energy Facility is built, while delaying the scope of work components for which funds would not be needed if a Facility is built.

A summary of the consultant solicitation process is provided below.

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**Range of Proposal Amounts Submitted**

$329,760 to $421,725

The Request for Proposals (RFP) was sent to six engineering firms and was obtained by others after being published on the City web site. The response period was 37 days. Proposals were received from three firms. The proposal amount ranged from a high of $421,725 to a low of $329,760. The firms not proposing indicated that they did not think they could be competitive, were too busy, and the work did not fit into their schedule. The RFP process allows the City to negotiate the price of the work upon selection of the successful firm. An evaluation committee consisting of Public Works Department Engineering Services and Environmental Services staff reviewed the proposals. The committee carefully reviewed each firm's qualifications and submittal in response to the criteria identified in the RFP. The criteria used to evaluate the proposing firms included: quality and completeness of proposal; quality, performance, and effectiveness of the solutions; proposer's experience; cost; proposer's financial stability; proposer's ability to perform the work within the time specified; proposer's prior record of performance with the City; and proposer's compliance with applicable laws and regulations. Golder was selected because of its understanding of the needed design services, the inclusion of Hargreaves Associates as a subconsultant, its experience in dealing with regulatory agencies, and past professional experience of the key team members. Following the consultant selection process and the passage of Measure E, the scope of work of the contract was reduced. Therefore the final Contract amount is lower than the amounts in any of the proposals.

**Composting Operations**

Prior to the passage of Measure E, staff had planned to begin sending curbside collected yard trimmings, as well as yard trimmings generated by City crews and contractors, to the Sunnyvale SMaRT® Station in early 2012. This transfer was scheduled to occur once the City's existing composting operation had generated a sufficient volume of finished compost to complete the stockpile of vegetative soil needed for closure of the landfill. Yard trimmings delivered to the SMaRT® Station are trucked to the Z-Best facility in Gilroy for aerobic windrow composting, the same composting method used at the City's composting operation.

If the City is granted permission from the regulatory agencies to postpone the closure of the landfill then the City has the option of continuing the composting operation at the landfill instead of sending the yard trimmings to the SMaRT® Station. Staff has had several outreach meetings to discuss these options with stakeholders. Measure E proponents are in favor of retaining the City's composting operation while the potential Energy/Compost Facility is considered, while Measure E opponents want the composting operation to end as originally scheduled.
Staff has completed estimates of the short-term costs for continuing the City's composting operation at its current location and for sending the City’s yard trimmings to the SMaRT Station. The estimates are provided in Attachment C. Staff’s estimates conclude that the costs for both options in the short term are about $45,000 per month. It is important to note that the City's composting operation cost estimate only includes the out-of-pocket costs for the City to continue composting over the next several months without considering land rent or vehicle replacement contributions. This cost estimate also does not include one-time large equipment repair costs and overhauls that may or may not be needed in the short term. Conversely, the cost estimate for delivering yard trimmings to the SMaRT Station assumes that the cost per ton of yard trimmings paid by the City for materials delivered to the SMaRT Station during FY 2011 will remain unchanged. However, the contract with the operator of the SMaRT Station includes provisions that could result in a significantly reduced cost per ton for yard trimmings if additional diversion from refuse is achieved. Improvements to the quality of the “fines” generated through the sorting process are needed in order to meet market specifications for composting, and thus additional diversion from the landfill. Potential solutions for improvements are being investigated, but there is no scheduled date for implementing a solution.

Given the relatively nominal price differential in the two options, Staff recommends that the City's existing composting operation be continued at its current location while the process and timeline for considering a Compost/Energy Facility is developed over the next several months. Staff intends to return to Council in approximately three months to present the process and timeline, and to obtain further Council direction on the composting operation. Staff will also return to Council before incurring any significant expenses from the composting operation in the event of equipment failures or other factors, or if changes occur at the SMaRT® Station that significantly reduce the cost of sending the City’s yard trimmings there.

**Resource Impact**

**ARI Contract Amendment No. 1**
The $29,700 for this amendment is available from existing funds in the FY 2012 Wastewater Treatment Fund operating budget. The original $197,758 came from three sources: Wastewater Treatment Fund, the Electric Fund Calaveras Reserve, and the Refuse Fund. The Wastewater Treatment Fund is being used for this amendment because the recent questions and concerns have focused on the relationship between the potential Energy/Compost Facility and the Wastewater Treatment Plant.

**Landfill Closure and Golder Associates Inc. Contract**
Funds for this project/contract are available in the FY 2011-2012 Refuse Fund Capital Improvement Program project (RF-11001 Palo Alto Landfill Phase II C Closure).

**Policy Implications**

February 06, 2012
(ID # 2361)
Recommendations of this staff report are consistent with existing City policies including the Baylands Master Plan and Comprehensive Plan as amended by Measure E on November 8, 2011.

**Environmental Review**
An Environmental Impact Report (EIR) was prepared in connection with the 1978 Baylands Master Plan. The Golder professional services contract implements the final portion of the landfill closure and will cover any additional environmental assessment required for full landfill closure. Any variations to the approved closure plan will be subject to an additional environmental assessment under the California Environmental Quality Act (CEQA). Likewise any construction of a new Energy/Compost Facility will be subject to additional environmental review.

**Attachments:**
- A - ARI Contract C11136602 Amendment No. 1 (PDF)
- B - Golder Associates Inc. Contract C12143502 (PDF)
- C - Composting Cost Analysis (PDF)
- D - Public Letters to Council (PDF)

Prepared By: Charles Muir,

Department Head: J. Michael Sartor, Director

City Manager Approval: James Keene, City Manager
AMENDMENT NO.1 TO CONTRACT NO.C11136602
BETWEEN THE CITY OF PALO ALTO AND
ALTERNATIVE RESOURCES, INC.

This Amendment No.1 to Contract No. C11136602 ("Contract") is entered into ___________, 2011, by and between the CITY OF PALO ALTO, a charter city and a municipal corporation of the State of California ("CITY"), and Alternative Resources, Inc., a corporation in the State of Massachusetts, located at 1732 Main Street, Concord, Massachusetts, 01742-3837 ("CONTRACTOR").

RE C I T A L S:

WHEREAS, the Contract was entered into between the parties for the provision of preparation of a Feasibility Study for a Dry Anaerobic Digestion Facility; and

WHEREAS, the parties wish to amend the Contract;

NOW, THEREFORE, in consideration of the covenants, terms, conditions, and provisions of this Amendment, the parties agree:

SECTION 1. Section 4 of the Contract is hereby amended to read as follows:

"Section 4. NOT TO EXCEED COMPENSATION. The compensation to be paid to CONSULTANT for performance of the Services described in Exhibit "A", including both payment for professional services and reimbursable expenses, shall not exceed two hundred twenty-seven thousand four hundred fifty-eight dollars ($227,458)."

SECTION 2. The following exhibit to the Contract is hereby amended to read as set forth in the attachment to this Amendment, which is incorporated in full by this reference:

a. Exhibit "A" entitled "Scope of Services".
b. Exhibit "B" entitled "Schedule of Performance".c. Exhibit "C" entitled "Compensation".

SECTION 3. Except as herein modified, all other provisions of the Contract, including any exhibits and subsequent amendments thereto, shall remain in full force and effect.
IN WITNESS WHEREOF, the parties have by their duly authorized representatives executed this Amendment on the date first above written.

APPROVED:

City Manager

APPROVED AS TO FORM:

Senior Asst. City Attorney

Alternative Resources, Inc.

By:

Name: James J. Bina

Title: Principal

Attachments:

EXHIBIT "A": SCOPE OF SERVICES
EXHIBIT "B": SCHEDULE OF PERFORMANCE
EXHIBIT "c": COMPENSATION
GENERAL DESCRIPTION OF WORK

The project is to prepare a Feasibility Study for a Dry Anaerobic Energy/Compost Facility in the City of Palo Alto, California. The facility would recover energy from methane derived from dry anaerobic digestion of food scraps, yard trimmings, and, possibly wastewater biosolids. The chief residual from the processes would be compost. The Feasibility Study would include an economic, greenhouse gas, and environmental impact analysis. An Initial Study (CEQA Checklist) pursuant to the California Environmental Quality Act will also be prepared. (Further California Environmental Quality Act work may be performed through a Contract Amendment.) Several suboptions will be studied. The costs, impacts, and benefits will be compared to a "no action" alternative and to the alternative of a similar processing facility located outside of Palo Alto, but within 20 miles. The location of the Palo Alto facility would be immediately southeast of the Palo Alto Regional Water Quality Control Plant on an 8-9 acre site.

BACKGROUND

The City of Palo Alto currently handles organic residuals in the following ways:

1. Yard trimmings are composted at the Palo Alto landfill site in uncovered windrows;

2. Residential food scraps are disposed of with the garbage and landfilled in South San Jose;

3. Commercial food scraps are increasingly being source separated and composted near Gilroy, CA, with the remainder being landfilled in South San Jose; and

4. Wastewater Biosolids are dewatered and incinerated at the Regional Water Quality Control Plant in Palo Alto.

The 8-9 acre site described above is currently on dedicated Parkland. The site would have to be undedicated by a vote of the residents before an Energy/Compost Facility could be constructed. A number of other approvals and permits would also be needed. However, this Scope of Services does not include working on these approval processes. The City already operates its own gas and electric utilities, which are potential users of gas or energy generated by an anaerobic digestion facility. The electric enterprise fund has been directed to procure 33% of its electric supply from renewable sources by 2015. The gas enterprise fund
The City of Palo Alto is investigating opportunities to supply some load using biogas. The City also fuels a portion of its vehicle fleet with compressed natural gas, which is another potential use for biogas generated by the facility.

**PROJECT APPROACH**

The Consultant will evaluate and compare three basic alternatives:

Alternative 1: A new dry anaerobic digestion facility adjacent to the Palo Alto Wastewater Treatment Plant.

Alternative 2: A similar Regional Facility adjacent to the San Jose Wastewater Treatment Plant.

Alternative 3: The current facilities and plans which Palo Alto has arranged for its organics residuals following closure of the Palo Alto Landfill.

The City will provide much of the data for the analysis of Alternatives 2 and 3. The majority of the Consultants work will be on Alternative 1. There are two sites involved in Alternative 1, the 8-9 acre Landfill site just Southeast of the Wastewater Treatment Plant, and the Wastewater Treatment Plant itself. Therefore, there will be subalternatives to Alternative 1 as follows:

**Sub-options to Alternative 1:**

1a) A new dry anaerobic digestion for yard, food and biosolids on the landfill site (biosolids in separate cells).

1b.) Dry anaerobic digestion for yard, food and wet anaerobic digestion for biosolids on the landfill site.

1c.) Dry anaerobic digestion for yard and food on the landfill site and wet anaerobic digestion for biosolids on the Wastewater Plant site.

1d.) Dry anaerobic digestion for yard and food waste and no methane production from the biosoids.

The analysis of all four sub-options of Alternative 1 will assume that a common methane energy recovery facility will be located on the Landfill site. The analysis of all main options and sub-options will include:

1. A financial analysis;

2. A life-cycle analysis of greenhouse gas emissions; and
3. An analysis of environmental and other impacts.

The analysis of the wastewater anaerobic digestion process in Alternative 2 and Alternative 3 will be performed through a separate, parallel study: The Wastewater Long Range Planning process. The firm selected for that study will provide the evaluation of wet anaerobic digestion to the Consultant. Following submittal of Preliminary Analysis (Task 4), City will consider whether other alternatives should be considered as well. For example, it may become apparent that an alternative of a somewhat larger or smaller site would better accommodate a cost effective option, and be within the intent of the Council April 5, 2010 Directive to staff.

CONSULTANT SERVICES

TASK 1: Development of Detailed Workplan
The Consultant will develop a draft detailed Workplan and attend a kick-off meeting in Palo Alto with City representatives. The draft Workplan will be available for review prior to the meeting. Other goals of the kick-off meeting will be to review the draft Workplan and schedule, to establish the City's goals, objectives and expectations for the Feasibility Study and Environmental Impact Initial Study, and to establish lines of communication.

TASK 2: Community Scoping for Feasibility Study and for Environmental Review
The Consultant will attend a community meeting arranged by the City to solicit input on the Feasibility Study and Environmental Impact Initial Study. In addition to gathering information from the public on the Feasibility Study, a primary purpose of the community scoping meeting will be to identify key community concerns regarding the project's potential environmental effects. The CEQA environmental review process will be described, as necessary, and the opportunities for the public to participate in the environmental review process will be identified. Following the meeting, City comments will be incorporated into and a final Workplan will be issued.

TASK 3: Preparation of Draft Preliminary Financial and Greenhouse Gas Analysis
The Consultant will develop a financial model to evaluate each of the four (4) sub-options of Alternative 1. Using budgetary cost estimates supplemented with additional information such as estimated financing costs, the Consultant will calculate annual costs per ton and the total present value cost over the life cycle for each sub-option. The economic model will be constructed to enable the analysis of alternative project
development scenarios (for example, private ownership and operation compared to publically-financed design/build/operate implementation), as well as the impact of potential grant and funding sources. In addition, the economic model will provide for consideration of the potential cost-savings associated with the prevailing tax exempt market should the City own the energy/compost facility. The preliminary financial model will be submitted to the City for review.

Key environmental parameters will be considered in preparing the draft preliminary evaluation. The key environmental parameters will be identified through consultation with the City, through the community scoping meeting input, and based on the professional experience of the project team. The key environmental parameters will be presented in a data management system format.

The greenhouse gas (GHG) analysis will discuss the current state of the science (e.g., Intergovernmental Panel on Climate Change's [IPCC] Fourth Assessment Report) along with applicable regulatory framework and relevant guidance (e.g., Assembly Bill [AB] 32, recently adopted CEQA Guideline amendments and Bay Area Air Quality Management District’s [BAAQMD] Air quality Guidance and GHG Thresholds of Significance). Specifically, as required by Senate Bill 97, the CEQA Guidelines were revised on December 30, 2009, to address GHG emissions under CEQA; this analysis will comply with these newly adopted guidelines along with those adopted by BAAQMD on June 2, 2010. The following analysis will be conducted for all alternatives and sub-options.

For project-generated construction-related emissions, the Urban Emissions Model (URBEMIS) will be used to estimate increases in GHGs (e.g., heavy-duty construction equipment exhaust). This modeling will be based on BAAQMD-recommended input parameters, project-specific construction data (e.g., size of disturbed ground area, construction phasing schedule), and URBEMIS default settings.

URBEMIS, the BAAQMD GHG Model (BGM), and methods from the California air Resources Board (ARB) will be used to estimate direct project-generated operational-related emissions of GHGs for mobile, stationary, and area source types (e.g., vehicle trips associated with facility employees and material collection and delivery). This modeling will be based on BAAQMD-recommended input parameters, project-specific operational data (e.g., type and size of the proposed facility, operational schedule), default settings, and project specific traffic data (e.g., overall trip generation and vehicle miles traveled [VMT]). Other applicable quantification methods, emissions factors, and assumptions protocols from, but not limited to, the Western Climate
Initiative, IPCC, California Climate Action Registry's General Reporting Protocol, and ARB will be used to estimate long-term operational-related indirect source emissions. These types of facilities are not a covered sector under ARB regulation for the mandatory reporting of GHG emissions; however, aspects of the digester offset quantification protocol may apply. Additionally, though mandatory reporting would not be required or utilization of the digester offset protocol, quantification methods selected for this project will rely on ARB requirements and default emission factors, where applicable to this exact facility type, as stated in the regulation for usability in the future and substantiation of approach for legal defensibility. This analysis will also address the GHG emissions (e.g., lifecycle) from the alternate fates (e.g., composting, land filling, and incinerating) of the wastes by virtue of the collection of these wastes for use with regards to the proposed project. Increases in GHGs will be compared to applicable thresholds and mitigation measures prepared as needed that clearly identify timing, responsibility, and performance standards. A two-tiered approach will be used to assess the project's potential generation of GHGs and its incremental contribution to the cumulative effect resulting from emission of the GHGs as follows: (1) the potential for project-generated GHG emissions to have a significant impact on the environment and (2) the potential for the project to conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions. The amount of GHGs determined in this analysis (and associated impacts) will be presented in a data management system.

**TASK 4: Preparation of Final Preliminary Financial and Greenhouse Gas Analysis**
Based on the City's comments from review of the preliminary financial and greenhouse analysis, a final preliminary analysis will be submitted to the City. This will include a working model in Excel format that will allow the City to test a change in clearly identified variables to assess the impact on life-cycle cost and greenhouse gas emissions.

**TASK 5: Preparation of Draft Feasibility Study and California Environmental Quality Act Checklist**
The Consultant will assist the City in presenting the preliminary financial analysis to the Community and City Council. In consultation with the City, comments and suggestions received from these presentations will be incorporated into a draft feasibility report which will be prepared to succinctly compile the results of the work performed. The report will include an
overview, introduction, waste analysis, conversion technology facility description, and economic analysis. The introduction will include a description of the project planning and history, system elements, and participants. The waste analysis section of the report will include an overview of the existing solid waste management system in the City as well as summarizing available information on waste generation, composition of yard trimmings, food scraps, and biosolids, and waste flow control provisions. Site regulatory and permitting considerations will be included with descriptions of the technologies responding to the request-for-information described in Task 8. The economic analysis section of the report will include a discussion of scope and methods, capital and operation and maintenance costs estimates (including staffing estimates), financing considerations, and life-cycle cost analysis with sensitivities.

Following presentation of the Preliminary Analysis to the community and the City Council, the Consultant will prepare a Draft CEQA Initial Study (CEQA Checklist). The Consultant will coordinate with City of Palo Alto staff and the project team members to identify the elements to be included in the Initial Study project description. The project description will focus on the changes anticipated with implementation of the Feasibility Study. Depending upon the alternative approach selected by the City, the key considerations will likely include the odor and traffic generating potential of the proposed Dry Anaerobic Energy/Compost Facility and its compatibility with Byxbee Park users, biological resources, and the nearby municipal airport.

The Environmental Checklist Form will be completed with explanations for each response for the proposed project. The level of analysis and degree of impact will vary depending on the environmental impacts anticipated from the proposed project. An administrative draft Initial Study will be prepared for review by City staff and the project team members. The Initial Study will be revised based on the comments received on the administrative draft documents. The completed document will be presented to the City for public distribution.

**TASK 6: Preparation of Final Feasibility Study, California Environmental Quality Act Checklist, and Workplan for Completion of California Environmental Quality Act Analysis.**

The Consultant will assist the City in presenting the draft Feasibility Study to the Community and to City Council. Comments and suggestions received from these presentations will be incorporated, in consultation with the City, into a final Feasibility Study. Feedback gathered during the City Council meeting will be used to finalize the Initial Study including any information presented regarding potential environmental effects.
or suggested mitigation strategies. The administrative draft Initial Study will be revised based on the comments received during the City Council meeting. The completed document will be submitted to the City.

**TASK 7:** Preparation of Workplan for Complete California Environmental Quality Act Analysis.
Following completion of the Initial Study, the Consultant will confer with the City and the project team regarding the appropriate level of CEQA review for the Feasibility Study (i.e., Program EIR, Project-level EIR, or Focused EIR). Based on the direction provided by the City, the Consultant will prepare a work plan for the preparation of the environmental review document identified by the City as being appropriate for the Feasibility Plan.

**TASK 8:** Analysis of Energy Generation from Methane.
Four (4) sub-options for Alternative 1 will be evaluated for a new dry anaerobic facility at the landfill site. These options are in the following matrix:

<table>
<thead>
<tr>
<th>Sub-option</th>
<th>Anaerobic Digestion System</th>
<th>Yard Trimmings</th>
<th>Food Scraps</th>
<th>Biosolids</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 a)</td>
<td>Dry</td>
<td>X</td>
<td>X</td>
<td>X (separate cell)</td>
</tr>
<tr>
<td></td>
<td>Wet</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1 b)</td>
<td>Dry</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Wet</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1 c)</td>
<td>Dry</td>
<td>X</td>
<td>X</td>
<td>X (wastewater treatment plant site)</td>
</tr>
<tr>
<td></td>
<td>Wet</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1 d)</td>
<td>Dry</td>
<td>X</td>
<td>X</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Wet</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

The Consultant will prepare a request-for-information (RFI) document for selected technology companies, requesting cost and performance data for each of the sub-options identified above. The Consultant understands that cost and performance data for the wet anaerobic digestion or biosolids will be provided by another...
firm selected by the City for the facility planning process associated with the wastewater treatment facility (i.e., the Long Range Facilities Plan).

The RFI will include an introduction, discussion of general conditions, schedule, submission of information requirements, and qualification information. The RFI approach will enable the Consultant to solicit project-specific information and will enable the responding companies to incorporate their current thinking regarding both technology and business postures in their responses. The Consultant's database will also be used to compare the cost and performance data received from the technology companies through the RFI process for reasonableness. Adjustments will be made to cost and performance data input to the economic model, as deemed necessary.

Based on the response to the RFI and the Consultant's experience and judgment, the quantity of biogas generated in each of the four (4) sub-options will be estimated. The quantity of landfill gas available from the Palo Alto landfill will be considered in a separate sensitivity analysis and a recommendation made as to whether landfill gas should be incorporated into the sub-options.

The methane-rich gas produced from the dry anaerobic digestion process can be used in a variety of electrical generation equipment including: internal combustion engines, gas turbines, gas turbines in a combined cycle configuration, or fuel cells. The methane-rich gas can also be upgraded for production of compressed natural gas or pipeline quality natural gas. A common methane energy recovery system will be adopted by the Consultant for the analysis of the four (4) sub-options. This selection will be made based on the Consultant’s experience and the responses to the RFI received from technology companies.

The Consultant will also investigate grant and funding opportunities that could result in either a lower overall amount of borrowing or a lower cost of capital. These include, among others, Clean Renewable Energy Bonds (CREBS), Qualified Energy Conservation Bonds (QECBs), Tax Credit Bonds, United States Department of Energy (USDOE) grants, and loan guarantees. Additional funding opportunities may be available through various State-administered programs.

In addition, the Consultant will analyze the advantages and disadvantages of public and private models for project delivery, considering ownership, risk sharing for performance and cost, financing options and opportunities for grants and low interest loans available on a State and Federal basis for different methods of project delivery. These methods include both public and private models; design-build (DB), design-build-operate (DBO)
and design-build-own-operate-transfer (DBOOT).

A preliminary site engineering analysis will be conducted for the landfill site including consideration of access, space requirements, rough grading requirements, foundation considerations, and interconnection of utilities. The City will provide the Consultant with a quantity estimate of cubic yards of in-place refuse that will need to be relocated from the site. The City will also provide the Consultant copies of previous geotechnical investigations performed on and adjacent to the landfill site. A conceptual site layout drawing will be prepared indicating the arrangement and location of the facility on the site. The drawing will be compatible with the City's GIS system. If facility information is available in sufficient detail to depict plan and side views, additional drawings will be prepared depicting a three dimensional view of the facility.

**TASK 9: Project Management**
The Consultant will meet with the City monthly to review progress and establish priorities for work to be conducted the following month. It is anticipated that these meetings will be conducted both in person, as needed, and by teleconference.

**TASK 10: Additional Services**
Ascent Environmental-GHG Model: Additional runs of the GHG model to accommodate: transport and processing of yard trimmings at the Z-Best compost facility in Gilroy instead of the AD facility in San Jose; eliminating biosolids from consideration thereby anaerobically digesting food scraps and yard trimmings only; and additional model adjustments and runs to account for changes in the assumptions for wet anaerobic digestion of biosolids, production of pipeline quality gas and site preparation. Attendance at an additional meeting with City Council, not anticipated in the original scope.

Alternative Resources Inc.-Additional runs of the Economic Model to address: eliminating biosolids from consideration thereby anaerobically digesting food scraps and yard trimmings only; increasing future costs for continued incineration of biosolids; applying a contingency for export options for Alternatives 2 and 3; and to include up to two other sensitivity analyses as may result from public review and comment on the draft economic analyses.

**TASK 11: RESPOND TO PUBLIC QUESTIONS ON FINAL FEASIBILITY REPORT.**
In Task 11, the Consultant will respond to public questions regarding the Final Feasibility Report (dated 9/20/11) and in doing Amendment 1 to C11136602
so provide one set of revisions to the Final Feasibility Report and June 2011 Power Point Presentation to City Council.

**TASK 12: ASSIST CITY IN DETERMINING AN ACTION PLAN FOLLOWING THE PASSAGE OF MEASURE E.**

In Task 12, the Consultant shall, assist the City in determining an action plan for the 10 acre site undedicated by the passage of Measure E during the November 2011 elections. Work shall include:

- Participating in a meeting with City staff to review the recommendations and approach for next steps made in the Final Feasibility Report, to discuss how these recommendations are impacted by passage of Measure E, to identify other City actions (such as landfill closure and the development of the Long Range Facilities Plan for biosolids management for the RWQCP) which will impact or be impacted by next steps regarding the Energy/Compost Facility or export options, and to discuss an integrated approach for an action plan;

- Conducting a half day “workshop” with appropriate City officials and staff to review an approach for soliciting firm technical and cost proposals for an Energy/Compost Facility and for export options, such approach to consider City preferences for technology, site development, type of materials to be processed, energy generation/use, facility ownership, financing, project delivery method/risk allocation, scope of services, performance, environmental mitigation, and business terms;

- In conjunction with City staff, developing a draft action plan, identifying an approach, next steps and schedule;

- Participating in a public meeting with City staff and interested public groups to discuss the draft action plan, and responding to comments from these parties, prepare a final draft action plan for presentation to City Council; and

- Assisting City staff to prepare a final action plan based on direction from City Council.
**EXHIBIT “B”**

SCHEDULE OF PERFORMANCE FOR RESPONDING TO PUBLIC QUESTIONS/INQUIRIES ON FINAL FEASIBILITY STUDY; ASSISTING CITY IN DETERMINING AN ACTION PLAN FOR AN AD FACILITY FOLLOWING THE PASSAGE OF MEASURE E

<table>
<thead>
<tr>
<th>TASK</th>
<th>DESCRIPTION</th>
<th>COMPLETION NO. OF WORKING DAYS FROM NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Respond to public comments from final feasibility study and revise PowerPoint presentation.</td>
<td>10</td>
</tr>
<tr>
<td>12-A1</td>
<td>Meet with City to develop an action plan.</td>
<td>15</td>
</tr>
<tr>
<td>12-A2</td>
<td>Half-day workshop for City officials and City staff.</td>
<td>20</td>
</tr>
<tr>
<td>12-A3</td>
<td>Develop draft action plan.</td>
<td>30</td>
</tr>
<tr>
<td>12-A4</td>
<td>Discuss action plan and respond to comments from the public; prepare final draft action plan for City Council.</td>
<td>60</td>
</tr>
<tr>
<td>12-A5</td>
<td>Revise action plan based on direction from City Council.</td>
<td>90</td>
</tr>
</tbody>
</table>
CITY OF PALO ALTO CONTRACT NO.: C11136602

EXHIBIT "C" (Page 1 of 2)

COMPENSATION

The CITY agrees to compensate the CONSULTANT for professional services performed in accordance with the terms and conditions of this Agreement, and as set forth in the budget schedule below. Compensation shall be paid to the CONSULTANT on a Not To Exceed basis for responding to public questions/inquiries on final feasibility study including updating PowerPoint Presentation to Council Task 12A and assisting City in determining an action plan for an AD facility following the passage of Measure E Tasks 12B1-5.

The compensation to be paid to CONSULTANT under this Agreement for all services described in Exhibit “A” including the reimbursable expenses shall not exceed $27,000. CONSULTANT agrees to complete all Tasks, including reimbursable expenses, within this amount. In the event CITY authorizes any Additional Services, the maximum compensation shall not exceed $29,700 or ten percent (10%) of the total contract amount. Any work performed or expenses incurred for which payment would result in a total exceeding the maximum amount of compensation set forth herein shall be at no cost to the CITY.
CONSULTANT shall perform the tasks and categories of work as outlined and budgeted below. The CITY's project manager may approve in writing the transfer of budget amounts between any of the tasks or categories listed below provided the total compensation for the tasks, including reimbursable expenses and add alternates, does not exceed $27,000 and the total compensation for Additional Services does not exceed $29,700.
CITY OF PALO ALTO CONTRACT NO.: C11136602

EXHIBIT “C” (Page 2 of 2)

FEES

RESPOND TO PUBLIC QUESTIONS/INQUIRIES ON FINAL FEASIBILITY STUDY; ASSIST CITY IN DETERMINING AN ACTION PLAN FOR AN AD FACILITY FOLLOWING THE PASSAGE OF MEASURE E

<table>
<thead>
<tr>
<th>TASK</th>
<th>DESCRIPTION</th>
<th>NOT TO EXCEED FEE</th>
</tr>
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<tbody>
<tr>
<td>1 - 9</td>
<td>Workplan, Feasibility Study, Environmental Review, Project Management</td>
<td>$171,858</td>
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<tr>
<td>10</td>
<td>Additional Services (Not to Exceed)</td>
<td>$18,000</td>
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<td>Reimbursable expenses</td>
<td>$7,900</td>
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<td><strong>TOTAL NOT TO EXCEED FEE</strong> - ORIGINAL CONTRACT</td>
<td>$197,758</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TASK</th>
<th>DESCRIPTION</th>
<th>NOT TO EXCEED FEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Respond to public comments from final feasibility study and revise PowerPoint Presentation.</td>
<td>$2,410</td>
</tr>
<tr>
<td>12-A1</td>
<td>Meet with City to develop an action plan.</td>
<td>$3,660</td>
</tr>
<tr>
<td>12-A2</td>
<td>Half-day workshop for City officials and City staff.</td>
<td>$6,360</td>
</tr>
<tr>
<td>12-A3</td>
<td>Develop draft action plan.</td>
<td>$3,320</td>
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<tr>
<td>12-A4</td>
<td>Discuss action plan and respond to comments from the public; prepare final draft action plan for City Council.</td>
<td>$3,500</td>
</tr>
<tr>
<td>12-A5</td>
<td>Revise action plan based on direction from City Council.</td>
<td>$3,500</td>
</tr>
<tr>
<td></td>
<td><strong>Estimated reimbursable expenses</strong></td>
<td>$4,250</td>
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<tr>
<td></td>
<td><strong>TOTAL NOT TO EXCEED FEE for all Tasks</strong></td>
<td>$27,000</td>
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### CITY OF PALO ALTO CONTRACT NO.: C11136602

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Services (10% of all Tasks)</td>
<td>$2,700</td>
</tr>
<tr>
<td>TOTAL NOT TO EXCEED FEE (Contract Amendment No.1)</td>
<td>$29,700</td>
</tr>
<tr>
<td>TOTAL NOT TO EXCEED FEE - ORIGINAL CONTRACT Additional Services - ORIGINAL CONTRACT</td>
<td>$197,758</td>
</tr>
<tr>
<td>TOTAL NOT TO EXCEED FEE for all Tasks and Additional Services</td>
<td>$227,458</td>
</tr>
</tbody>
</table>
CITY OF PALO ALTO CONTRACT NO. C12143502

AGREEMENT BETWEEN THE CITY OF PALO ALTO AND
GOLDER ASSOCIATES, INC.
FOR PROFESSIONAL SERVICES

This Agreement is entered into on this ___ day of January, 2012, ("Agreement") by and between the CITY OF PALO ALTO, a California chartered municipal corporation ("CITY"), and GOLDER ASSOCIATES, INC, a U.S. corporation in the State of Georgia with offices located, located at 1000 Enterprise Way, Suite 190, Roseville, CA 95678 ("CONSULTANT").

RECATIALS
The following recitals are a substantive portion of this Agreement.

A. CITY intends to install a closure cap upon Phase IIC of the Palo Alto Landfill ("Project") and desires to engage a consultant to provide services for design, California Environmental Quality Act (CEQA) compliance, permitting, and Construction Quality Assurance (CQA) in connection with the Project ("Services").

B. CONSULTANT has represented that it has the necessary professional expertise, qualifications, and capability, and all required licenses and/or certifications to provide the Services.

C. CITY in reliance on these representations desires to engage CONSULTANT to provide the Services as more fully described in Exhibit "A", attached to and made a part of this Agreement.

NOW, THEREFORE, in consideration of the recitals, covenants, terms, and conditions, contained in this Agreement, the parties agree:

AGREEMENT

SECTION 1. SCOPE OF SERVICES. CONSULTANT shall perform the Services described in Exhibit "A" in accordance with the terms and conditions contained in this Agreement. The performance of all Services shall be to the reasonable satisfaction of CITY.

SECTION 2. TERM. The term of this Agreement shall be from the date of its full execution through completion of the services in accordance with the Schedule of Performance attached as Exhibit "B" unless terminated earlier pursuant to Section 19 of this Agreement.

SECTION 3. SCHEDULE OF PERFORMANCE. Time is of the essence in the performance of Services under this Agreement. CONSULTANT shall complete the Services within the term of this Agreement and in accordance with the schedule set forth in Exhibit "B", attached to and made a part of this Agreement. Any Services for which times for performance are not specified in this Agreement shall be commenced and completed by CONSULTANT in a reasonably prompt and timely manner based upon the circumstances and direction communicated to the CONSULTANT.
CITY's agreement to extend the term or the schedule for performance shall not preclude recovery of damages for delay if the extension is required due to the fault of CONSULTANT.

**SECTION 4. NOT TO EXCEED COMPENSATION.** The compensation to be paid to CONSULTANT for performance of the Services described in Exhibit “A”, including both payment for professional services and reimbursable expenses, shall not exceed one hundred ninety-three thousand seven hundred thirteen dollars ($193,713). In the event Additional Services are authorized, the total compensation for services and reimbursable expenses shall not exceed two hundred thirteen thousand one hundred thirteen dollars ($213,113). The applicable rates and schedule of payment are set out in Exhibit “C”, entitled “COMPENSATION,” which is attached to and made a part of this Agreement.

Additional Services, if any, shall be authorized in accordance with and subject to the provisions of Exhibit “C”. CONSULTANT shall not receive any compensation for Additional Services performed without the prior written authorization of CITY. Additional Services shall mean any work that is determined by CITY to be necessary for the proper completion of the Project, but which is not included within the Scope of Services described in Exhibit “A”.

**SECTION 5. INVOICES.** In order to request payment, CONSULTANT shall submit monthly invoices to the CITY describing the services performed and the applicable charges (including an identification of personnel who performed the services, hours worked, hourly rates, and reimbursable expenses), based upon the CONSULTANT’s billing rates (set forth in Exhibit “C”). If applicable, the invoice shall also describe the percentage of completion of each task. The information in CONSULTANT’s payment requests shall be subject to verification by CITY. CONSULTANT shall send all invoices to the City’s project manager at the address specified in Section 13 below. The City will generally process and pay invoices within thirty (30) days of receipt.

**SECTION 6. QUALIFICATIONS/STANDARD OF CARE.** All of the Services shall be performed by CONSULTANT or under CONSULTANT’s supervision. CONSULTANT represents that it possesses the professional and technical personnel necessary to perform the Services required by this Agreement and that the personnel have sufficient skill and experience to perform the Services assigned to them. CONSULTANT represents that it, its employees and subconsultants, if permitted, have and shall maintain during the term of this Agreement all licenses, permits, qualifications, insurance and approvals of whatever nature that are legally required to perform the Services.

All of the services to be furnished by CONSULTANT under this agreement shall meet the professional standard and quality that prevail among professionals in the same discipline and of similar knowledge and skill engaged in related work throughout California under the same or similar circumstances.

**SECTION 7. COMPLIANCE WITH LAWS.** CONSULTANT shall keep itself informed of and in compliance with all federal, state and local laws, ordinances, regulations, and orders that may affect in any manner the Project or the performance of the Services or those engaged to perform Services under this Agreement. CONSULTANT shall procure all permits and licenses, pay all charges and fees, and give all notices required by law in the performance of the Services.
SECTION 8. ERRORS/OMISSIONS. CONSULTANT shall correct, at no cost to CITY, any and all errors, omissions, or ambiguities in the work product submitted to CITY, provided CITY gives notice to CONSULTANT. If CONSULTANT has prepared plans and specifications or other design documents to construct the Project, CONSULTANT shall be obligated to correct any and all errors, omissions or ambiguities discovered prior to and during the course of construction of the Project. This obligation shall survive termination of the Agreement.

SECTION 9. COST ESTIMATES. If this Agreement pertains to the design of a public works project, CONSULTANT shall submit estimates of probable construction costs at each phase of design submittal. If the total estimated construction cost at any submittal exceeds ten percent (10%) of the CITY’s stated construction budget, CONSULTANT shall make recommendations to the CITY for aligning the PROJECT design with the budget, incorporate CITY approved recommendations, and revise the design to meet the Project budget, at no additional cost to CITY.

SECTION 10. INDEPENDENT CONTRACTOR. It is understood and agreed that in performing the Services under this Agreement CONSULTANT, and any person employed by or contracted with CONSULTANT to furnish labor and/or materials under this Agreement, shall act as and be an independent contractor and not an agent or employee of the CITY.

SECTION 11. ASSIGNMENT. The parties agree that the expertise and experience of CONSULTANT are material considerations for this Agreement. CONSULTANT shall not assign or transfer any interest in this Agreement nor the performance of any of CONSULTANT’s obligations hereunder without the prior written consent of the city manager. Consent to one assignment will not be deemed to be consent to any subsequent assignment. Any assignment made without the approval of the city manager will be void.

SECTION 12. SUBCONTRACTING. Notwithstanding Section 11 above, CITY agrees that subconsultants may be used to complete the Services. The subconsultants authorized by CITY to perform work on this Project are:

1. Hargreaves Associates
2. TRA Environmental Sciences, Inc.

CONSULTANT shall be responsible for directing the work of any subconsultants and for any compensation due to subconsultants. CITY assumes no responsibility whatsoever concerning compensation. CONSULTANT shall be fully responsible to CITY for all acts and omissions of a subconsultant. CONSULTANT shall change or add subconsultants only with the prior approval of the city manager or his designee.

SECTION 13. PROJECT MANAGEMENT. CONSULTANT will assign Randall Wall as the project director to have supervisory responsibility for the performance, progress, and execution of the Services and Ken Haskell as the project manager to represent CONSULTANT during the day-to-day work on the Project. If circumstances cause the substitution of the project director, project manager, or any other key personnel for any reason, the appointment of a substitute project director and the assignment of any key new or replacement personnel will be subject to the prior written approval of the CITY’s project manager. CONSULTANT, at CITY’s request, shall promptly
remove personnel who CITY finds do not perform the Services in an acceptable manner, are uncooperative, or present a threat to the adequate or timely completion of the Project or a threat to the safety of persons or property.

The City’s project manager is Ron Arp, Public Works Department, Environmental Services Division, P.O. Box 10250 Palo Alto, CA 94303, Telephone: 650-496-5930. The project manager will be CONSULTANT’s point of contact with respect to performance, progress and execution of the Services. The CITY may designate an alternate project manager from time to time.

SECTION 14. OWNERSHIP OF MATERIALS. Upon delivery, all work product, including without limitation, all writings, drawings, plans, reports, specifications, calculations, documents, other materials and copyright interests developed under this Agreement shall be and remain the exclusive property of CITY without restriction or limitation upon their use. CONSULTANT agrees that all copyrights which arise from creation of the work pursuant to this Agreement shall be vested in CITY, and CONSULTANT waives and relinquishes all claims to copyright or other intellectual property rights in favor of the CITY. Neither CONSULTANT nor its contractors, if any, shall make any of such materials available to any individual or organization without the prior written approval of the City Manager or designee. CITY acknowledges that its use of the work product is limited to the purposes contemplated by the scope of work and that the CONSULTANT makes no representation of the suitability of the work product for use in or application to circumstances not contemplated by the scope of work.

SECTION 15. AUDITS. CONSULTANT will permit CITY to audit, at any reasonable time during the term of this Agreement and for three (3) years thereafter; CONSULTANT’s records pertaining to matters covered by this Agreement. CONSULTANT further agrees to maintain and retain such records for at least three (3) years after the expiration or earlier termination of this Agreement.

SECTION 16. INDEMNITY.

16.1. To the fullest extent permitted by law, CONSULTANT shall protect, indemnify, defend and hold harmless CITY, its Council members, officers, employees and agents (each an “Indemnified Party”) from and against any and all demands, claims, or liability of any nature, including death or injury to any person, property damage or any other loss, including all costs and expenses of whatever nature including attorneys fees, experts fees, court costs and disbursements (“Claims”) that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, its officers, employees, agents or contractors under this Agreement, regardless of whether or not it is caused in part by an Indemnified Party.

16.2. Notwithstanding the above, nothing in this Section 16 shall be construed to require CONSULTANT to indemnify an Indemnified Party from Claims arising from the negligence, sole negligence or willful misconduct of an Indemnified Party.

16.3. The acceptance of CONSULTANT’s services and duties by CITY shall not operate as a waiver of the right of indemnification. The provisions of this Section 16 shall survive the expiration or early termination of this Agreement.
SECTION 17. WAIVERS. The waiver by either party of any breach or violation of any covenant, term, condition or provision of this Agreement, or of the provisions of any ordinance or law, will not be deemed to be a waiver of any other term, covenant, condition, provisions, ordinance or law, or of any subsequent breach or violation of the same or of any other term, covenant, condition, provision, ordinance or law.

SECTION 18. INSURANCE.

18.1. CONSULTANT, at its sole cost and expense, shall obtain and maintain, in full force and effect during the term of this Agreement, the insurance coverage described in Exhibit "D". CONSULTANT and its contractors, if any, shall obtain a policy endorsement naming CITY as an additional insured under any general liability or automobile policy or policies.

18.2. All insurance coverage required hereunder shall be provided through carriers with AM Best’s Key Rating Guide ratings of A-:VII or higher which are licensed or authorized to transact insurance business in the State of California. Any and all contractors of CONSULTANT retained to perform Services under this Agreement will obtain and maintain, in full force and effect during the term of this Agreement, identical insurance coverage, naming CITY as an additional insured under such policies as required above.

18.3. Certificates evidencing such insurance shall be filed with CITY concurrently with the execution of this Agreement. The certificates will be subject to the approval of CITY’s Risk Manager and will contain an endorsement stating that the insurance is primary coverage, to the extent any covered losses are caused by CONSULTANT’s negligence and will not be canceled by the insurer except after filing with the Purchasing Manager thirty (30) days' prior written notice of the cancellation, CONSULTANT shall be responsible for ensuring that current certificates evidencing the insurance are provided to CITY’s Purchasing Manager during the entire term of this Agreement.

18.4. The procuring of such required policy or policies of insurance will not be construed to limit CONSULTANT’s liability hereunder nor to fulfill the indemnification provisions of this Agreement. Notwithstanding the policy or policies of insurance, CONSULTANT will be obligated for the full and total amount of any damage, injury, or loss caused by or directly arising as a result of the Services performed under this Agreement, including such damage, injury, or loss arising after the Agreement is terminated or the term has expired.

SECTION 19. TERMINATION OR SUSPENSION OF AGREEMENT OR SERVICES.

19.1. The City Manager may suspend the performance of the Services, in whole or in part, or terminate this Agreement, with or without cause, by giving ten (10) days prior written notice thereof to CONSULTANT. Upon receipt of such notice, CONSULTANT will immediately discontinue its performance of the Services.

19.2. CONSULTANT may terminate this Agreement or suspend its performance of the Services by giving thirty (30) days prior written notice thereof to CITY, but only in the event of a substantial failure of performance by CITY.
19.3. Upon such suspension or termination, CONSULTANT shall deliver to the City Manager immediately any and all copies of studies, sketches, drawings, computations, and other data, whether or not completed, prepared by CONSULTANT or its contractors, if any, or given to CONSULTANT or its contractors, if any, in connection with this Agreement. Such materials will become the property of CITY.

19.4. Upon such suspension or termination by CITY, CONSULTANT will be paid for the Services rendered or materials delivered to CITY in accordance with the scope of services on or before the effective date (i.e., 10 days after giving notice) of suspension or termination; provided, however, if this Agreement is suspended or terminated on account of a default by CONSULTANT, CITY will be obligated to compensate CONSULTANT only for that portion of CONSULTANT’s services which are of direct and immediate benefit to CITY as such determination may be made by the City Manager acting in the reasonable exercise of his/her discretion. The following Sections will survive any expiration or termination of this Agreement: 14, 15, 16, 19.4, 20, and 25.

19.5. No payment, partial payment, acceptance, or partial acceptance by CITY will operate as a waiver on the part of CITY of any of its rights under this Agreement.

SECTION 20. NOTICES.

All notices hereunder will be given in writing and mailed, postage prepaid, by certified mail, addressed as follows:

To CITY: Office of the City Clerk
City of Palo Alto
Post Office Box 10250
Palo Alto, CA 94303

With a copy to the Purchasing Manager and the Project Manager

To CONSULTANT: Attention of the project director
at the address of CONSULTANT recited above

SECTION 21. CONFLICT OF INTEREST.

21.1. In accepting this Agreement, CONSULTANT covenants that it presently has no interest, and will not acquire any interest, direct or indirect, financial or otherwise, which would conflict in any manner or degree with the performance of the Services.

21.2. CONSULTANT further covenants that, in the performance of this Agreement, it will not employ subconsultants, contractors or persons having such an interest. CONSULTANT certifies that no person who has or will have any financial interest under this Agreement is an officer or employee of CITY; this provision will be interpreted in accordance with the applicable provisions of the Palo Alto Municipal Code and the Government Code of the State of California.

21.3. If the Project Manager determines that CONSULTANT is a “Consultant” as that term is defined by the Regulations of the Fair Political Practices Commission, CONSULTANT
shall be required and agrees to file the appropriate financial disclosure documents required by the Palo Alto Municipal Code and the Political Reform Act.

SECTION 22. NONDISCRIMINATION. As set forth in Palo Alto Municipal Code section 2.30.510, CONSULTANT certifies that in the performance of this Agreement, it shall not discriminate in the employment of any person because of the race, skin color, gender, age, religion, disability, national origin, ancestry, sexual orientation, housing status, marital status, familial status, weight or height of such person. CONSULTANT acknowledges that it has read and understands the provisions of Section 2.30.510 of the Palo Alto Municipal Code relating to Nondiscrimination Requirements and the penalties for violation thereof, and agrees to meet all requirements of Section 2.30.510 pertaining to nondiscrimination in employment.

SECTION 23. ENVIRONMENTALLY PREFERRED PURCHASING AND ZERO WASTE REQUIREMENTS. CONSULTANT shall comply with the City’s Environmentally Preferred Purchasing policies which are available at the City’s Purchasing Department, incorporated by reference and may be amended from time to time. CONSULTANT shall comply with waste reduction, reuse, recycling and disposal requirements of the City’s Zero Waste Program. Zero Waste best practices include first minimizing and reducing waste; second, reusing waste and third, recycling or composting waste. In particular, Consultant shall comply with the following zero waste requirements:

- All printed materials provided by Consultant to City generated from a personal computer and printer including but not limited to, proposals, quotes, invoices, reports, and public education materials, shall be double-sided and printed on a minimum of 30% or greater post-consumer content paper, unless otherwise approved by the City’s Project Manager. Any submitted materials printed by a professional printing company shall be a minimum of 30% or greater post-consumer material and printed with vegetable based inks.
- Goods purchased by Consultant on behalf of the City shall be purchased in accordance with the City’s Environmental Purchasing Policy including but not limited to Extended Producer Responsibility requirements for products and packaging. A copy of this policy is on file at the Purchasing Office.
- Reusable/returnable pallets shall be taken back by the Consultant, at no additional cost to the City, for reuse or recycling. Consultant shall provide documentation from the facility accepting the pallets to verify that pallets are not being disposed.

SECTION 24. NON-APPROPRIATION

24.1 This Agreement is subject to the fiscal provisions of the Charter of the City of Palo Alto and the Palo Alto Municipal Code. This Agreement will terminate without any penalty (a) at the end of any fiscal year in the event that funds are not appropriated for the following fiscal year, or (b) at any time within a fiscal year in the event that funds are only appropriated for a portion of the fiscal year and funds for this Agreement are no longer available. This section shall take precedence in the event of a conflict with any other covenant, term, condition, or provision of this Agreement.

SECTION 25. MISCELLANEOUS PROVISIONS.
25.1. This Agreement will be governed by the laws of the State of California.

25.2. In the event that an action is brought, the parties agree that trial of such action will be vested exclusively in the state courts of California in the County of Santa Clara, State of California.

25.3. The prevailing party in any action brought to enforce the provisions of this Agreement may recover its reasonable costs and attorneys' fees expended in connection with that action. The prevailing party shall be entitled to recover an amount equal to the fair market value of legal services provided by attorneys employed by it as well as any attorneys' fees paid to third parties.

25.4. This document represents the entire and integrated agreement between the parties and supersedes all prior negotiations, representations, and contracts, either written or oral. This document may be amended only by a written instrument, which is signed by the parties.

25.5. The covenants, terms, conditions and provisions of this Agreement will apply to, and will bind, the heirs, successors, executors, administrators, assignees, and consultants of the parties.

25.6. If a court of competent jurisdiction finds or rules that any provision of this Agreement or any amendment thereto is void or unenforceable, the unaffected provisions of this Agreement and any amendments thereto will remain in full force and effect.

25.7. All exhibits referred to in this Agreement and any addenda, appendices, attachments, and schedules to this Agreement which, from time to time, may be referred to in any duly executed amendment hereto are by such reference incorporated in this Agreement and will be deemed to be a part of this Agreement.

25.8. If, pursuant to this contract with CONSULTANT, City shares with CONSULTANT personal information as defined in California Civil Code section 1798.81.5(d) about a California resident ("Personal Information"), CONSULTANT shall maintain reasonable and appropriate security procedures to protect that Personal Information, and shall inform City immediately upon learning that there has been a breach in the security of the system or in the security of the Personal Information. CONSULTANT shall not use Personal Information for direct marketing purposes without City's express written consent.

25.9. All unchecked boxes do not apply to this agreement.

25.10. The individuals executing this Agreement represent and warrant that they have the legal capacity and authority to do so on behalf of their respective legal entities.

Professional Services
Rev. June 2, 2010
IN WITNESS WHEREOF, the parties hereto have by their duly authorized representatives executed this Agreement on the date first above written.

CITY OF PALO ALTO

City Manager

APPROVED AS TO FORM:

Senior Asst. City Attorney

GOLDER ASSOCIATES, INC.

By: [Signature]

Name: Kenneth C. Haskell

Title: Principal/Vice-President

Attachments:

- EXHIBIT "A": SCOPE OF WORK
- EXHIBIT "B": SCHEDULE OF PERFORMANCE
- EXHIBIT "C": COMPENSATION
- EXHIBIT "C-I": SCHEDULE OF RATES
- EXHIBIT "D": INSURANCE REQUIREMENTS
BACKGROUND

The Palo Alto Landfill (PALF) is an unlined, Class III municipal solid waste landfill. The landfill is approximately 126 acres, of which approximately 76 acres have been filled to grade and closed in accordance with the relevant closure regulations. Closure activities to date occurred in three construction phases (Phases I, IIA, and IIB) between 1991 and 2000. Closure construction for the remaining approximately 50 acres (Phase IIC) is scheduled for 2012.

After closure, the landfill is being developed as a public park, which is referred to as Byxbee Park. The initial phase of Byxbee Park, encompassing the 29-acre Phase I closure area, was completed in 1991. The Phase IIA and IIB portions of the park were opened to public access in 2011.

The City has been accepting clean fill soil and stockpiling these soils for use in the final closure cover. These soils are being stockpiled on a portion of Phase IIC and along the western portion of Phase IIB. The City anticipates that all soil required for closure will be imported by the start of closure construction.

The scope of work for this Phase IIC closure project involves the preparation of construction plans and specifications for the closure cap, geotechnical and environmental investigation of the former cogeneration facility area (Cogen Area), environmental review in conformance with the California Environmental Quality Act (CEQA), construction and bid support, and construction quality assurance (CQA) monitoring. Golder Associates, Inc. previously prepared the recent Facility Closure and Post-closure Monitoring Plan (FCPMP) that addressed the design and construction of the closure cover and improvements to the landfill gas (LFG) and leachate controls. The LFG and leachate control improvements have since been completed as a separate project in 2011.

WORK PLAN SUMMARY

The major components of the project include:

- Preparation of the final construction plans and specifications for Phase IIC closure will include updating the existing site topography and final grades for closure, updating the plans to show the location of the soil stockpile locations, revising the Phase IIC/IIB closure tie-in to reflect the current Phase IIB grades that are several feet higher than when the FCPMP was prepared in 2008, and updating the plans to reflect the LFG and leachate system improvements that have already been completed.

- The site air compressor is currently located in the Cogen Area, which is surrounded by screening berms. The City believes that a low-permeability soil cover was constructed underneath the Cogen Area based on construction plans that were prepared at the time of construction. The intent was to construct the cogeneration facility on a closed portion of the landfill. However, the City does not have any documentation for the low-permeability soil layer construction, and the regulatory agencies likely have not reviewed
nor provided approval of this small closure area. A portion of this project involves investigating and characterizing the extent and quality of the low-permeability soil to see if it can be certified as closed in compliance with applicable regulations and the FCPMP.

- Support will be provided during bidding and construction to address bidder and contractor's technical questions and/or design conflicts that may arise during construction.
- The consultant will provide construction quality assurance oversight and prepare a CQA Report to gain regulatory approval of the Phase IIC closure.

The Golder Project Team will apply its extensive site knowledge to cost-effectively prepare the Phase IIC Closure Design and Documentation.

**TASK DETAILS**

**TASK 1 – COGEN AREA CAP CERTIFICATION**

Task 1 consists of the investigation of the existing final cover under the Cogen Area, and assuming favorable cap conditions are confirmed, preparing a letter certifying that the existing cap complies with applicable requirements of Title 27 of the California Code of Regulations.

The focus of this task will be to identify the thickness and extent of the various soil types, and to assess the permeability of the low-permeability soil cover. Specifically, certification requires confirmation of the following:

- The existence of a minimum 2-foot thick foundation layer
- The foundation layer is compacted to a minimum relative compaction of 90 percent
- The existence of a minimum 1-foot thick low-permeability soil layer with a permeability less than or equal to $1 \times 10^{-6}$ centimeters per second (cm/s)
- The low-permeability layer is compacted to a minimum relative compaction of 90 percent

We propose excavating a series of 6 to 8 test pits to define the lateral extent and thickness of the various soil types. The City will provide a backhoe and operator for the test pits.

Based on the size of the Cogen Area, we anticipate that the volumes of the foundation layer and the low-permeability soil layer are each less than 1,000 cubic yards (cy). In accordance with the CQA plan prepared by Golder for Phase IIC and testing frequencies typically accepted by CalRecycle and the RWQCB, we propose to obtain samples using Shelby tubes and drive samples in accordance with American Society for Testing and Materials Test Method D2937 (ASTM D2937) and to perform the following tests:

- Up to four samples of the foundation layer to measure in-situ density per ASTM D2937 and moisture (minimum frequency of 1 test per 250 cy)
- One Modified Proctor test each per ASTM D1557 for the foundation layer and low-
permeability soil layer

- Up to four samples of the low-permeability soil layer to measure in-situ density per ASTM D2937 and moisture (minimum frequency of 1 test per 250 cy)
- One sample of the low-permeability soil layer to measure permeability per ASTM D5084
- Up to four samples of the low-permeability soil layer to measure Atterberg Limits per ASTM D4318 and grain-size distribution per ASTM D422

Although Atterberg Limits and grain-size distribution tests are typically performed at a frequency of 1 test per 1,500 cy for the low-permeability soil layer, we propose four samples to demonstrate consistency of material properties and to assist with correlation of the soil permeability to the in-situ material properties.

Before proceeding with the field investigation and testing, we will submit the proposed sampling and testing plan to the RWQCB for review and approval.

Following completion of the field investigation and testing, Golder will provide a draft certification letter electronically (PDF format) for the City’s review. Following receipt of any City comments, Golder will finalize the certification letter. The final certification letter will be submitted to the RWQCB.

For cost estimating purposes, we have assumed the RWQCB will approved the field investigation and testing program, described above, and that the final cover in the Cogen Area will be determined to be consistent with Title 27 requirements.

**TASK 2 - PREPARE FINAL CLOSURE PLANS AND SPECIFICATIONS**

Golder will update the final closure plans, specifications, CQA Plan, bid schedule, and engineer’s cost estimate under Task 2. The latest version of the FCPMP shows a geomembrane cover as an engineered alternative design to the prescriptive final cover, but includes language to allow the use of the prescriptive cover in the event an economical source of suitable low-permeability soil is identified for the Phase IIIC closure. Golder will revisit this aspect of the design with the City to determine the best approach for the final cover.

Assuming that a geomembrane final cover is the preferred approach, we will contact geomembrane manufacturers to determine the approximate lead time for geomembrane manufacture and delivery. We will also outline the advantages and disadvantages of the City pre-ordering the geomembrane and providing the geomembrane to the closure contractor. If it is determined that pre-ordering the geomembrane is the best approach to meeting the time schedule presented in the RFP, Golder will prepare separate geomembrane material specifications and provide the City the estimated quantity of geomembrane required for closure.

For cost estimating purposes, we have assumed that the City will not pre-order the geomembrane.

As requested in the RFP, we will prepare a remote monitoring plan for the LFG and leachate wells. The remote monitoring plan will include:

- Site plan(s) showing the installation of the required power wiring and signal cables from
each monitoring location to the Cogen Area

- A conceptual design of the required remote monitoring instrumentation and central SCADA processor hardware and software for the City-requested monitoring parameters and locations
- Preliminary budgetary cost estimates for implementing and operating the complete remote monitoring system as presented in the City-approved conceptual design

The following elements are assumed to be included in the remote monitoring plan:

- Methane concentration and pressure (vacuum) for LFG wells
- Water level and pump discharge flow metering for leachate wells
- Integration of LFG flow, system vacuum, and blower speed data from the LFG flare station (expected to be rebid in spring 2012)

At a minimum, the site electrical and communication network plan will be included as an add-alternate bid item for the closure construction.

For the final closure plans, the drawings prepared as part of the FCPMP will be updated to address the following:

- Updated topography (using the latest site topographic map)
- Show the location of the City’s stockpiled soils
- Cover system tie-in at the Phase IIC/IIB boundary. The Phase IIC grades are now several feet higher than the Phase IIB low-permeability soil layer. We propose to show a minimum horizontal overlap between the Phase IIC geomembrane and Phase IIB low-permeability soil liner, but not requiring the geomembrane to directly contact the low-permeability soil, which would otherwise require expensive soil excavation.
- Include rip-rap erosion control where stormwater is concentrated on the south side of the landfill
- Incorporation of the existing Cogen Area Cap as appropriate per the results of Task 1
- Show the updated leachate and landfill gas control system that are currently in place
- Show the general arrangement with remote monitoring stations, wiring requirements, communications network diagram, and one-line power diagram

The technical specifications and CQA Plan will be updated to address the following:

- Updated specifications to address stormwater and erosion controls
- Revisit the maximum particle size and screening requirements for the foundation layer and vegetative soil cover. Soil that the City has imported contains rocks and other debris that could damage the geomembrane, and therefore it is expected to require some level of screening. Soil screening adds cost to the project and the requirements need to be carefully considered.
- Construction sequencing including specifying limits for the time and number of leachate and landfill gas wells that can be temporarily taken out of service to facilitate construction of the cover.
- Performance specification for selected remote monitoring system
• Update the CQA Plan to reflect our proposed CQA approach discussed in Task 6.

As part of this task, Golder will also complete the following:

• Prepare a written scope of work for the contractor that describes the work necessary for the construction project
• Update bid quantities and prepare a detailed bid schedule
• Prepare an updated engineer’s cost estimate

Golder will provide a draft copy each of the deliverable work products electronically (PDF format) for the City’s review. Following receipt of any City comments, Golder will finalize the various deliverables and issue one hard copy and one electronic copy. The deliverables for this task consist of the following:

• Construction plans (34”x22”)
• Remote Monitoring Plan
• Technical Specifications
• CQA Plan
• Contractor Scope of Work
• Bid Schedule and Quantities
• Engineer’s Cost Estimate

TASK 3 - FACILITY CLOSURE SAMPLING AND ANALYSES

Task 3 consists of verifying whether a hazardous-materials release has occurred at the Recycling Center or the Cogen Area, and if so, determining the nature and extent of the release so that appropriate corrective action can be taken by the City before the site is capped. Golder performed a Phase I/Phase II environmental site assessment at the Cogen Area in late 2002 and submitted the report in 2003. We concluded that less than 20 square feet of shallow soils were impacted by petroleum hydrocarbons and metals. In 2009, Golder performed an environmental assessment at the Recycling Center for soil impacts that may have resulted from temporary storage of recycled hazardous and universal wastes. We concluded that impacts were limited to petroleum hydrocarbons in two small areas where used motor oil had been stored.

Based on Golder’s knowledge of site conditions at the Recycling Center and Cogen Area, we believe that a limited assessment of the nature and extent of soil impacts is appropriate to confirm conditions and develop cost-efficient corrective action. After reviewing available documents, Golder will prepare a sampling and analysis plan for each facility, seek City approval, implement the plan, and prepare cleanup recommendations that are appropriate for the protection of human health and the environment. The recommendations may vary from no action to removal of contaminated soils. Appropriate cleanup goals will be based on regulatory criteria such as Environmental Screening Levels (ESLs) established by the San Francisco RWQCB or Regional Screening Levels (RSLs) established by the US Environmental Protection Agency. After corrective actions are complete, Golder will prepare a summary report suitable for submittal to regulatory agencies to support the implemented corrective action.
TASK 4 - ENVIRONMENTAL REVIEW

During this task, TRA Environmental Services (TRA) will prepare an Initial Study (IS) Checklist according to Appendix G of the State CEQA Guidelines (Title 14, Section 15000 et seq of the California Code of Regulations) to assess the potential environmental effects of constructing the closure cap. The IS will follow the format specified in the CEQA Guidelines, which includes a detailed project description with supporting maps, photos, and figures, a description of the environmental setting of the proposed site, complete responses to each Initial Study Checklist question with a clear statement as to the level of impact (less than significant or significant) and, where necessary, measures to mitigate potentially significant effects.

Construction of the closure cap involves the spreading and compacting of soil, geomembrane, and vegetative soil over the surface of the landfill. The IS/MND will reference appropriate information from the FCPMP, Baylands Master Plan, and Byxbee Park Master Plan. The closure of Phase IIC of the landfill is guided by a number of permit and regulatory documents, as well as the Baylands Master Plan and Byxbee Park Master Plan. The landfill is the focus of a host of complex land use issues, which will be thoroughly described in the IS/MND. The closure of Phase IIC of the landfill and its conversion to non-irrigated pastoral park is consistent with existing land use plans for the area.

The anticipated impacts of these proposed activities are related to aesthetics, temporary air quality/greenhouse gas emissions during construction, and water quality impacts. These impacts are considered minor and can be mitigated to a less-than-significant level, therefore the anticipated level of CEQA documentation would be a Mitigated Negative Declaration (MND).

TRA will conduct a kick-off meeting with City staff and conduct a site visit to evaluate the on-site conditions and take representative site photos to develop a detailed project description. Any remaining questions will be posed through a data request to the City. Once all the questions are answered, a complete project description will be prepared then reviewed for technical accuracy with the City. TRA will then proceed with responding to the Checklist questions. Once completed, the entire document will be submitted to the City for administrative review. Any comments or edits will be incorporated into a public review IS/MND and then circulated to the public for 30 days. As a cost saving measure, we assume that TRA will provide the City with an electronic version of the administrative draft and public review version of the IS/MND and that the City will make any paper copies of the public review version of the document.

It is TRA’s understanding that the traffic associated with the closure construction will not exceed the traffic levels currently allowed under the existing solid waste facility permit, which is 475 trips per day. If, at a later date, a traffic study does become necessary, TRA will contract with Hexagon Transportation Consultants (San Jose) to prepare a traffic report.

Mitigation Monitoring and Reporting Plan
After closure of the public review period for the CEQA document, TRA will provide the City with an electronic version of the Mitigation Monitoring and Reporting Plan (MMRP).

CEQA Notices and Public Noticing
TRA will prepare a Notice of Completion and Notice of Determination and provide the City with an electronic version of each notice. TRA assumes that the City will conduct the legal noticing required under CEQA and mail the required number of documents to the State Clearinghouse.

Meetings and Hearings
For cost estimating purposes, we have assumed attendance by the TRA Project Manager and Senior Analyst at one meeting with City staff (2 hours), one Planning and Transportation Commission meeting (4 hours for each staff person) and one City Council meeting (4 hours for each staff person). We can attend additional meetings at the request of the City on a time and materials basis.

TASK 5 - CONSTRUCTION AND BID SUPPORT
Golder will provide construction and bid support as follows:

- Attend one Pre-Bid Meeting. Our design Engineer-of-Record and CQA Engineer-of-Record will attend this meeting. Golder will record the meeting minutes and transmit the minutes to the City for review.
- Attend one Pre-Construction Meeting. Our CQA Engineer-of-Record will attend this meeting and record the meeting minutes. The minutes will be transmitted to the City for review.
- Attend weekly Construction Meetings. Our CQA Engineer-of-Record will attend up to 12 weekly construction meetings. For each meeting, we will record the meeting minutes, which will be transmitted to the City for review.
- Provide responses to technical Requests for Information (RFI’s) and contractor submittals. Based on our experience with similar projects, we have budgeted 40 hours of staff time to review contractor submittals and address technical issues in RFI’s submitted by the contractor.

TASK 6 - CONSTRUCTION QUALITY ASSURANCE
Task 6 consists of providing CQA oversight and preparation of a CQA Report at the completion of the Phase IIIC closure construction. We have outlined our general approach and specific task elements below.

General Approach
For past closure projects, the City has had the construction contractors hire a firm to complete the construction quality assurance testing and then the City compiled the testing and observation data and prepared a CQA Report.

The City’s past approach to CQA follows what Golder refers to as the “Federal Approach,” in which most of the field and laboratory testing and observations are completed by the contractor’s subcontracted testing firm. The CQA Engineer-of-Record’s role is then to provide oversight to check that the tests are being completed correctly, including completing side-by-side test comparisons, verifying the minimum testing frequencies are being met, and the observation and documentation requirements of the CQA Plan are being fulfilled.
In contrast, “Owner Retained QC/QA Approach” differs in that the majority of the field and laboratory CQA testing is completed by a firm retained by the owner. This approach is more commonly used for landfills that are constructed or closed in California. This approach puts more distance and independence between the firm performing the field and laboratory testing and the contractor.

Golder has extensive experience in providing CQA services under both approaches. In fact, this past summer, Golder provided CQA services for closures at the Pacheco Pass Landfill (Gilroy) and Pescadero Landfill (San Mateo County) using the Owner Retained QC/QA Approach. We were also the CQA Engineer-of-Record using the Federal Approach for a closure located on U.S. Forest Service lands in Tuolumne County, California. We also provided CQA field testing and observation service to a general contractor for a project that involved capping waste materials with a geomembrane cover on a Superfund site near Redding, California.

The advantage of the “Federal Approach” is that it can be cost-effective and provides fewer potential conflicts between the firm providing the CQA testing and the contractor. The disadvantage is that the contractors solicit bids for CQA testing firms and typically select one on the basis of cost and not qualifications. Therefore, the CQA testing firm sometimes has marginal qualifications to perform the work. For these cases, the CQA Engineer-of-Record often needs to increase on-site oversight, which can offset any cost savings provided by having the contractor retain the CQA testing firm.

For this project, Golder proposes using a “modified Federal Approach” in which the contractor retains a CQA testing firm to perform the routine soils testing and observation. There are numerous local firms that are qualified to do this work. Golder will then provide testing and observation services for specialized items, such as the geomembrane cover. As part of the CQA Plan, Golder will include minimum experience requirements for the CQA testing firm and clearly define the roles of the CQA Engineer and CQA testing firm. We believe this will approach provide the City with the optimum balance between cost effectiveness and quality.

CQA Oversight

Golder proposes to implement the above “Federal Approach” for the routine earthworks QA/QC inspection and testing to ensure that the City gets the most cost-effective QA/QC services. Golder will provide field QA/QC inspection and testing for the geomembrane and geocomposite, which involves a specialty inspection service that is provided by only a limited number of companies in the Bay Area. All QA/QC inspection and testing will be completed under the oversight by Golder’s CQA Engineer-of-Record to confirm that inspection and testing protocols are being properly implemented including verification of test methods and test frequencies.

Golder anticipates that the closure construction will take approximately 12 to 16 weeks to complete. We anticipate that Golder’s active involvement, using the QA/QC approach described above, will be 12 weeks. We anticipate that the geomembrane and geocomposite will take approximately 6 weeks to complete assuming the geosynthetics installer works 6 days per week.

Golder’s CQA Engineer-of-Record will coordinate with the contractor’s QA/QC testing firm and Golder’s field technician to ensure that the following data is recorded:
• A daily field report describing the work completed and any construction conflicts or non-compliance issues and their status and/or resolution
• Weather conditions including impacts to construction progress (i.e. high winds during geomembrane deployment or precipitation)
• Document that the contractor’s construction methods comply with the plans and specifications including construction sequencing for the landfill gas and leachate controls
• Document that the materials used comply with the plans and specifications
• The location and results of all field and laboratory testing
• Representative construction photographs

At the completion of the construction project, Golder will prepare a CQA Certification Report that summarizes the following:

• Summarize the work performed by the prime contractor and its subcontractors, including the dates that various components of the closure were completed
• Summarize the roles of the contractor’s firm and Golder’s CQA team in providing overall QA/QC services.
• Document design changes or clarifications
• Document the location and results of all field and laboratory testing
• Document the construction methods and materials used by the Contractor
• Provide representative construction photographs
• Provide a certification statement that closure construction was completed in accordance with the plans, specifications, CQA Plan and applicable requirements of Title 27 of the California Code of Regulations.

Golder will provide a draft CQA Report electronically (PDF format) for the City’s review. Following receipt of any City comments, Golder will finalize the report and issue four hard copies and one electronic copy.

PROPOSED INNOVATIONS

For this project, Golder offers the City a number of innovations and unique knowledge that we believe will result in cost savings. Specific innovations include:

• Our CQA approach provides the best combination of using a “Federal Approach” and “Owner Retained Approach” to ensure the City gets the best combination of value and quality of construction
• Our involvement in the sampling and testing for the closure of the Recycling Center area and Cogen Area ensures that we can complete this work cost effectively and provide the City with substantial cost savings. We anticipate that this work can be completed significantly less than $20,000 budget specified in the RFP.
EXHIBIT “B”
SCHEDULE OF PERFORMANCE

CONSULTANT shall perform the Services so as to complete each milestone within the number of days/weeks specified below. The time to complete each milestone may be increased or decreased by mutual written agreement of the project managers for CONSULTANT and CITY so long as all work is completed within the term of the Agreement. CONSULTANT shall provide a detailed schedule of work consistent with the schedule below within 2 weeks of receipt of the notice to proceed.

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<th>Milestones</th>
<th>Completion No. of Days From NTP</th>
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<tr>
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<td>2. TASK 2 – Prepare Final Closure Plan &amp; Specifications</td>
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<td>3. TASK 3 – Facility Closure Sampling &amp; Analysis</td>
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<td>4. TASK 4 – Environmental Review</td>
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<td>5. TASK 5 – Construction &amp; Bid Support</td>
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<td>6. TASK 6 – Construction Quality Assurance</td>
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EXHIBIT “C”
COMPENSATION

The CITY agrees to compensate the CONSULTANT for professional services performed in accordance with the terms and conditions of this Agreement, and as set forth in the budget schedule below. Compensation shall be calculated based on the hourly rate schedule attached as exhibit C-1 up to the not to exceed budget amount for each task set forth below.

The compensation to be paid to CONSULTANT under this Agreement for all services described in Exhibit “A” (“Basic Services”) and reimbursable expenses shall not exceed $371,289. CONSULTANT agrees to complete all Basic Services, including reimbursable expenses, within this amount. In the event CITY authorizes any Additional Services, the maximum compensation shall not exceed $408,389. Any work performed or expenses incurred for which payment would result in a total exceeding the maximum amount of compensation set forth herein shall be at no cost to the CITY.

CONSULTANT shall perform the tasks and categories of work as outlined and budgeted below. The CITY’s Project Manager may approve in writing the transfer of budget amounts between any of the tasks or categories listed below provided the total compensation for Basic Services, including reimbursable expenses, does not exceed $371,289 and the total compensation for Additional Services does not exceed $37,100.

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REIMBURSABLE EXPENSES

The administrative, overhead, secretarial time or secretarial overtime, word processing, photocopying, in-house printing, insurance and other ordinary business expenses are included within the scope of payment for services and are not reimbursable expenses.

CITY shall reimburse CONSULTANT for the following reimbursable expenses at cost plus 10% and as budgeted in the table above:
A. Subconsultant fees.
B. Laboratory testing

Expenses for which CONSULTANT shall be reimbursed at cost are:
A. Travel outside the San Francisco Bay area, including transportation and meals, will be reimbursed at actual cost subject to the City of Palo Alto’s policy for reimbursement of travel and meal expenses for City of Palo Alto employees.

B. Long distance telephone service charges, cellular phone service charges, facsimile transmission and postage charges are reimbursable at actual cost.

All requests for payment of expenses shall be accompanied by appropriate backup information. Any expense anticipated to be more than budgeted shall be approved in advance by the CITY’s project manager.

ADDITIONAL SERVICES

The CONSULTANT shall provide additional services only by advanced, written authorization from the CITY. The CONSULTANT, at the CITY’s project manager’s request, shall submit a detailed written proposal including a description of the scope of services, schedule, level of effort, and CONSULTANT’s proposed maximum compensation, including reimbursable expense, for such services based on the rates set forth in Exhibit C-1. The additional services scope, schedule and maximum compensation shall be negotiated and agreed to in writing by the CITY’s project manager and CONSULTANT prior to commencement of the services. Payment for additional services is subject to all requirements and restrictions in this Agreement.

Work required because the following conditions are not satisfied or are exceeded shall be considered as additional services:
• Additional testing requirements for the existing clay cap material under the Cogen Area.
• Design and phasing for a cap beneath the Cogen Area if the existing clay material beneath it cannot be certified as described under Task 1.
• Assistance with a separate procurement for geomembrane material if necessary due to manufacturer’s availability.
• A traffic study for CEQA Environmental Review.
EXHIBIT "C-1"
HOURLY RATE SCHEDULE

2011 Fee Schedule
Golder Associates Inc.

Labor

<table>
<thead>
<tr>
<th>Category</th>
<th>Level</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sr. Executive</td>
<td>9</td>
<td>$275</td>
</tr>
<tr>
<td>Sr. Practice/Program Leader</td>
<td>8</td>
<td>$240</td>
</tr>
<tr>
<td>Practice/Program Leader</td>
<td>7</td>
<td>$230</td>
</tr>
<tr>
<td>Senior Consultant</td>
<td>6</td>
<td>$200</td>
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<tr>
<td>Senior Engineer/Scientist</td>
<td>5</td>
<td>$182</td>
</tr>
<tr>
<td>Sr. Project Engineer/Scientist</td>
<td>4</td>
<td>$149</td>
</tr>
<tr>
<td>Project Engineer/Scientist</td>
<td>3</td>
<td>$125</td>
</tr>
<tr>
<td>Staff Engineer/Scientist</td>
<td>2</td>
<td>$ 98</td>
</tr>
<tr>
<td>Engineer/Scientist</td>
<td>1</td>
<td>$ 89</td>
</tr>
<tr>
<td>Senior Technician</td>
<td>LT3</td>
<td>$104</td>
</tr>
<tr>
<td>Staff Technician</td>
<td>LT2</td>
<td>$ 98</td>
</tr>
<tr>
<td>Technician</td>
<td>LT1</td>
<td>$ 69</td>
</tr>
<tr>
<td>Senior Drafter/CADD Technician</td>
<td>LD3</td>
<td>$ 95</td>
</tr>
<tr>
<td>Staff Drafter/CADD Technician</td>
<td>LD2</td>
<td>$ 83</td>
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<tr>
<td>Drafter/CADD Technician</td>
<td>LS1</td>
<td>$ 72</td>
</tr>
<tr>
<td>Senior Admin Support</td>
<td>LA3</td>
<td>$ 95</td>
</tr>
<tr>
<td>Staff Admin Support</td>
<td>LA2</td>
<td>$ 78</td>
</tr>
<tr>
<td>Admin Support</td>
<td>LA1</td>
<td>$ 69</td>
</tr>
</tbody>
</table>

Notes:
1 - Standard rates are increased by 1.5 times for legal services and by 2.0 times for depositions, testimony, and court time.

Expenses

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subconsultants</td>
<td>Cost + 10%</td>
</tr>
<tr>
<td>Other Indirect Costs</td>
<td>Cost + 10%</td>
</tr>
</tbody>
</table>
EXHIBIT “D”
INSURANCE REQUIREMENTS

CONTRACTORS TO THE CITY OF PALO ALTO (CITY), AT THEIR SOLE EXPENSE, SHALL FOR THE TERM OF THE CONTRACT OBTAIN AND MAINTAIN INSURANCE IN THE AMOUNTS FOR THE COVERAGE SPECIFIED BELOW, AFFORDED BY COMPANIES WITH AM BEST’S KEY RATING OF A-VII, OR HIGHER, LICENSED OR AUTHORIZED TO TRANSACT INSURANCE BUSINESS IN THE STATE OF CALIFORNIA.

AWARD IS CONTINGENT ON COMPLIANCE WITH CITY’S INSURANCE REQUIREMENTS, AS SPECIFIED, BELOW:

<table>
<thead>
<tr>
<th>REQUIRED</th>
<th>TYPE OF COVERAGE</th>
<th>REQUIREMENT</th>
<th>MINIMUM LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>WORKER'S COMPENSATION EMPLOYER'S LIABILITY</td>
<td>STATUTORY</td>
<td>EACH OCCURRENCE $1,000,000, AGGREGATE $1,000,000</td>
</tr>
<tr>
<td>YES</td>
<td>GENERAL LIABILITY, INCLUDING PERSONAL INJURY, BROAD FORM PROPERTY DAMAGE BLANKET CONTRACTUAL, AND FIRE LEGAL LIABILITY</td>
<td>BODILY INJURY</td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PROPERTY DAMAGE</td>
<td>$1,000,000</td>
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<tr>
<td></td>
<td></td>
<td>BODILY INJURY &amp; PROPERTY DAMAGE COMBINED</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>YES</td>
<td>AUTOMOBILE LIABILITY, INCLUDING ALL OWNED, HIRED, NON-OWNED</td>
<td>BODILY INJURY</td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EACH PERSON</td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EACH OCCURRENCE</td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PROPERTY DAMAGE</td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BODILY INJURY AND PROPERTY DAMAGE, COMBINED</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>YES</td>
<td>PROFESSIONAL LIABILITY, INCLUDING, ERRORS AND OMISSIONS, MALPRACTICE (WHEN APPLICABLE), AND NEGLIGENT PERFORMANCE</td>
<td>ALL DAMAGES</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>YES</td>
<td>THE CITY OF PALO ALTO IS TO BE NAMED AS AN ADDITIONAL INSURED: CONTRACTOR, AT ITS SOLE COST AND EXPENSE, SHALL OBTAIN AND MAINTAIN, IN FULL FORCE AND EFFECT THROUGHOUT THE ENTIRE TERM OF ANY RESULTANT AGREEMENT, THE INSURANCE COVERAGE HEREIN DESCRIBED, INSURING NOT ONLY CONTRACTOR AND ITS SUBCONTRACTORS, IF ANY, BUT ALSO, WITH THE EXCEPTION OF WORKERS' COMPENSATION, EMPLOYER'S LIABILITY AND PROFESSIONAL INSURANCE, NAMING AS ADDITIONAL INSUREDS CITY, ITS COUNCIL MEMBERS, OFFICERS, AGENTS, AND EMPLOYEES.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I. INSURANCE COVERAGE MUST INCLUDE:
   A. A PROVISION FOR A WRITTEN THIRTY DAY ADVANCE NOTICE TO CITY OF CANCELLATION;
   B. A CONTRACTUAL LIABILITY ENDORSEMENT ON THE COMMERCIAL GENERAL LIABILITY POLICY PROVIDING INSURANCE COVERAGE FOR CONTRACTOR'S AGREEMENT TO INDEMNIFY CITY;
   C. DEDUCTIBLE AMOUNTS IN EXCESS OF $5,000 REQUIRE CITY’S PRIOR APPROVAL.

II. CONTRACTOR MUST SUBMIT CERTIFICATES(S) OF INSURANCE EVIDENCING REQUIRED COVERAGE.

III. ENDORSEMENT PROVISIONS, WITH RESPECT TO THE INSURANCE AFFORDED TO “ADDITIONAL INSUREDS”
   A. PRIMARY COVERAGE

WITH RESPECT TO CLAIMS ARISING OUT OF THE OPERATIONS OF THE NAMED INSURED, INSURANCE AS AFFORDED BY THIS POLICY IS PRIMARY WITH RESPECT TO CLAIMS ARISING OUT OF THE CONSULTANT'S NEGLIGENCE AND IS NOT ADDITIONAL TO OR CONTRIBUTING WITH ANY OTHER INSURANCE CARRIED BY OR FOR THE BENEFIT OF THE ADDITIONAL INSUREDS.
B. CROSS LIABILITY (APPLIES TO COMMERCIAL GENERAL LIABILITY POLICY ONLY)

THE NAMING OF MORE THAN ONE PERSON, FIRM, OR CORPORATION AS INSUREDS UNDER THE POLICY SHALL NOT, FOR THAT REASON ALONE, EXTINGUISH ANY RIGHTS OF THE INSURED AGAINST ANOTHER, BUT THIS ENDORSEMENT, AND THE NAMING OF MULTIPLE INSUREDS, SHALL NOT INCREASE THE TOTAL LIABILITY OF THE COMPANY UNDER THIS POLICY.

C. NOTICE OF CANCELLATION

1. IF THE POLICY IS CANCELED BEFORE ITS EXPIRATION DATE FOR ANY REASON OTHER THAN THE NON-PAYMENT OF PREMIUM, THE ISSUING COMPANY SHALL PROVIDE CITY AT LEAST A THIRTY (30) DAY WRITTEN NOTICE BEFORE THE EFFECTIVE DATE OF CANCELLATION.

2. IF THE POLICY IS CANCELED BEFORE ITS EXPIRATION DATE FOR THE NON-PAYMENT OF PREMIUM, THE ISSUING COMPANY SHALL PROVIDE CITY AT LEAST A TEN (10) DAY WRITTEN NOTICE BEFORE THE EFFECTIVE DATE OF CANCELLATION.

NOTICES SHALL BE MAILED TO:

PURCHASING AND CONTRACT ADMINISTRATION
CITY OF PALO ALTO
P.O. BOX 10250
PALO ALTO, CA 94303
## Equipment Costs

<table>
<thead>
<tr>
<th>Equipment ID</th>
<th>Model Year</th>
<th>Description</th>
<th>Meter (11 months)</th>
<th>Meter Annualized</th>
<th>Meter Units</th>
<th>Parts and Labor 11 months</th>
<th>Parts and Labor Annualized</th>
<th>Sublet 11 months</th>
<th>Sublet Annualized</th>
<th>Fuel 11 months</th>
<th>Fuel Annualized</th>
<th>Combined Annualized Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>4218</td>
<td>2000</td>
<td>Freightliner FL80 Fuel Truck</td>
<td>392</td>
<td>428</td>
<td>miles</td>
<td>$6,165.56</td>
<td>$6,726.07</td>
<td>$448.42</td>
<td>$489.19</td>
<td>$775.15</td>
<td>$845.62</td>
<td>$8,060.87</td>
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<tr>
<td>4225</td>
<td>2005</td>
<td>Peterbilt 365 Water Truck</td>
<td>2641</td>
<td>3,099</td>
<td>miles</td>
<td>$8,256.87</td>
<td>$9,007.49</td>
<td>$2,482.42</td>
<td>$2,708.09</td>
<td>$4,960.35</td>
<td>$5,411.29</td>
<td>$17,126.88</td>
</tr>
<tr>
<td>4229</td>
<td>1992</td>
<td>Ford LNT-8000 Water Truck</td>
<td>208</td>
<td>227</td>
<td>miles</td>
<td>$2,383.88</td>
<td>$2,600.60</td>
<td>$155.55</td>
<td>$168.69</td>
<td>$120.01</td>
<td>$130.92</td>
<td>$2,901.21</td>
</tr>
<tr>
<td>4304</td>
<td>2001</td>
<td>Morbark 5600 Wood Grinder</td>
<td>386</td>
<td>545</td>
<td>hours</td>
<td>$79,796.27</td>
<td>$79,796.27</td>
<td>$6,124.89</td>
<td>$8,646.90</td>
<td>$26,586.14</td>
<td>$37,533.37</td>
<td>$125,976.55</td>
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<tr>
<td>4305</td>
<td>2007</td>
<td>Phoenix Powerscreen</td>
<td>732</td>
<td>799</td>
<td>hours</td>
<td>$11,346.15</td>
<td>$12,377.62</td>
<td>$1,356.05</td>
<td>$1,479.33</td>
<td>$12,109.54</td>
<td>$13,210.41</td>
<td>$27,067.35</td>
</tr>
<tr>
<td>4324</td>
<td>2006</td>
<td>Caterpillar 966G Loader</td>
<td>1030</td>
<td>1,124</td>
<td>hours</td>
<td>$25,469.31</td>
<td>$27,784.70</td>
<td>$7,388.29</td>
<td>$8,059.95</td>
<td>$18,694.84</td>
<td>$20,394.37</td>
<td>$56,239.03</td>
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<tr>
<td>4326</td>
<td>2008</td>
<td>Caterpillar 950H Loader</td>
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<td>799</td>
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<td>$11,346.15</td>
<td>$12,377.62</td>
<td>$1,356.14</td>
<td>$1,479.44</td>
<td>$12,109.54</td>
<td>$13,210.41</td>
<td>$27,067.46</td>
</tr>
</tbody>
</table>

Notes:
- Sublet costs are commercial charges. These costs include commercial tire service, machine shop work, hydraulic cylinder rebuilding, fire suppression system service, etc.
- Grinder Operated 8.5 months. All annualized grinder costs except Parts and Labor are based on 12/8.5. Conducted major repair on bell housing in early 2011.

---

## Grinder Rental Costs

<table>
<thead>
<tr>
<th>Rental Grinder</th>
<th>Number of events</th>
<th>Mobilization Costs per event</th>
<th>Annual Total Mobilization</th>
<th>Number of Days Onsite</th>
<th>Hours Per Day</th>
<th>Rental Cost per hour</th>
<th>Annual Operating Costs</th>
<th>Fuel Costs per Hour</th>
<th>Annual Fuel Costs</th>
<th>Total Annual Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract #S1113750</td>
<td>4</td>
<td>$800.00</td>
<td>$3,200.00</td>
<td>16</td>
<td>8</td>
<td>$300.00</td>
<td>$38,400.00</td>
<td>$68.88</td>
<td>$8,816.13</td>
<td>$50,416.13</td>
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## Labor Costs

<table>
<thead>
<tr>
<th>Class Number</th>
<th>Number of Staff</th>
<th>Description</th>
<th>Hourly Wage</th>
<th>Annual Salary</th>
<th>Benefits @ 60.03% Combined Salary and Benefits</th>
<th>Overtime</th>
<th>Total Annual Salary &amp; OT</th>
<th>Total Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.603</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>360</td>
<td>2</td>
<td>Heavy Equipment Operator</td>
<td>$33.05</td>
<td>$68,744.00</td>
<td>$41,452.63</td>
<td>$110,196.63</td>
<td>$41,452.63</td>
<td>$110,196.63</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Maintenance Assistant</td>
<td>$18.72</td>
<td>$7,787.52</td>
<td>$4,166.37</td>
<td>$12,483.37</td>
<td>$4,166.37</td>
<td>$12,483.37</td>
</tr>
</tbody>
</table>

Notes:
- Assume 8 hours per week picking litter

Lab Tests: 7 per year $200.00 $1,400.00 Annual Cost
- Reclaimed Water $1,000.00 Annual Cost
- Trash Bin: 2 cy bin serviced weekly $4,132.00 Annual Cost
- Solid Waste Facility Permit $13,722.00 Annual Cost
- Compost Sales: Assume Broker $50,000.00 Annual Revenue

Total Cost Per Month $48,984.68
Revenue Per Month $4,166.67
Net Cost Per Month $44,818.01
Sunnyvale SMaRT Station
Short Term Estimated Cost for Managing Palo Alto Yard Trimmings During 2012

FY 2011 SMaRT Station Tip Fee per ton: $30.23

<table>
<thead>
<tr>
<th>Tons Yard Trimmings</th>
<th>FY 2011</th>
<th>FY 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>GreenWaste Yard Trimmings to PA Landfill</td>
<td>12,800</td>
<td>12,185</td>
</tr>
<tr>
<td>GreenWaste Yard Trimmings to SMaRT Station</td>
<td>1,105</td>
<td>391</td>
</tr>
<tr>
<td>City Crews Yard Trimmings to PA Landfill</td>
<td>2,461</td>
<td>2,700</td>
</tr>
<tr>
<td>City Contractors Yard Trimmings to PA Landfill</td>
<td>1,394</td>
<td>1,450</td>
</tr>
<tr>
<td>Total Tons Yard Trimmings:</td>
<td>17,760</td>
<td>16,726</td>
</tr>
</tbody>
</table>

Total Tip Fee Costs Per Month at FY 2011 Tip Fee: $44,740 $42,136
I have not yet seen the staff report for the Measure E follow-up item on your agenda Monday. I understand, however, that Staff is recommending continuing the windrow composting for some indefinite period.

It is unlawful to continue this non-park use. Windrow Composting is not a permitted park use and was only ancillary to the landfilling that was justified as “shaping the park”. There is no justification for continuing the windrow composting operation on Byxbee Park. The windrow compost operation is not shaping the park and ample compost has been stockpiled for the vegetative cover.

Windrow composting may not continue on the 10 acre site by the very terms of the Initiative. Measure E did not in any way speak to windrow composting, but rather only facilities that would convert organics to compost AND green energy and specifically Dry Anaerobic Digestion. Windrow composting does not create any green energy. Nor is windrow composting “fully enclosed” as proponents assured voters. Measure E proponents repeatedly assured the voting public that the 10-acre site was “exclusively” for a facility to convert organics to green energy. (See attachment A)

Continuing the windrow composting is costly. Staff has ignored capital costs and rent in their most recent cost calculations. They “say” that if any machinery breaks down, they will return to Council for spending guidance. That’s a false assurance, since most of the equipment repairs have been done within the City Manager’s authorization. Sooner or later, the cost will be borne by the ratepayers.

None of the 51 remaining unopened acres of Byxbee Park have been capped, so continuing the windrow composting will interfere with the serious matter of final closure of the landfill and necessitate expensive migration of the windrows from one area to another in order to complete the capping.

Continuing windrow composting has no justification, is illegal and costly.

Sincerely,

Emily M. Renzel, Coordinator
Baylands Conservation Committee
1056 Forest Avenue
Palo Alto, CA 94301
Compost facts
Editor,

Palo Alto voters signed petitions for the Palo Alto Green Energy and Compost Initiative because they believe the city should convert its waste streams into valuable products instead of exporting them to Gilroy.

However, Enid Pearson's "Rebuttal to Hays" letter of May 6 distorted facts in a way that is typical of opponents.

She states that the 10 acres to be undedicated by the initiative are the equivalent of "eight football fields." That ignores the fact that Byxbee Park would still contain 127 acres, the equivalent of 100 football fields.

She states that anaerobic digestion (AD) would cost the city from $97 million to $167 million. However, the consultant acknowledged that critical factors that would save the city money were overlooked in the draft but will be included in the final feasibility study.

She claims the study will cost the city $1.6 million in lost tipping fees.

In fact, while the council temporarily suspended commercial acceptance of waste, there was no connection with the study.

She ignored the fact that exporting food and yard waste and continuing to incinerate biosolids would generate as much as 26,194 tons of greenhouse gases, more than twice as much as AD.

Finally, she falsely claimed that the undedicated land "can be used for any purpose the council determines," when in fact the Initiative would limit it to the exclusive purpose of converting waste, and also permit redecidual if not so used in 10 years.

Walter Hays
Parkside Drive
Palo Alto

Rebuttal to Renzel
Editor,

The purpose of the Palo Alto Green Energy and Compost Initiative is to give the city the opportunity, instead of shipping its waste elsewhere, to utilize anaerobic digestion to convert it to clean energy and compost. Since the only feasible location for such a process is an landfill dedicated as parkland, city ordinance requires a popular vote to undedicate even a small portion.

Emily Renzel's letter of April 22 argued that the decision to allow such a vote should be left solely to the City Council. Since there is some division in the community, however, an initiative petition to require a popular vote was appropriate (and signature gatherers encountered overwhelmingly positive responses).

Renzel's letter also suggests that public works or some other city department might make some unknown use of the parcel. In fact, the Initiative provides that the portion of the current dump to be undedicated (only 10 out of 126 acres) is to be used exclusively for converting our wastes, and it allows the council to redecidual it to parkland in 10 years if not so used.

Finally, her letter claims that the current financial analysis is "unfavorable." In fact, the consultant conceded that its initial draft omitted key favorable factors, and analyses by Compost Task Force Chair Cedric de La Beaussioniere indicates that "on a 30-year time-frame, local AD should save the city and rate-payers $22 to $57 million," making the $250,000 (continued from page 14)

(not $2 million as Renzel claims) for the feasibility study an excellent investment. See pagereenenergy.org.

Walter Hays
Parkside Drive
Palo Alto

Don't export our waste
Dear Editor: Tom Jordan's letter yesterday misses the point on Measure E.

Now that the landfill is closed, opponents of Measure E like Tom advocate the "Export Option" for dealing with our waste.

That would entail trucking all our yard and food waste, plus the leftovers from the sewage treatment plant, south to San Jose and Gilroy and paying tipping fees for companies there to process them - costing over 450,000 truck miles and upward of $2 million a year and emitting thousands of tons of greenhouse gases.

The purpose of Measure E is to explore the possibility of eliminating those costly exports and instead building a local anaerobic digestion facility to convert our wastes to valuable green energy and compost.

There is no point in doing that without a suitable location, and the only possible one is on 10 out of 126 acres of the former dump next to the sewage treatment plant, which can be undedicated only by popular vote.

Opponents make extravagant claims that Measure E would be costly, risky, etc.

However, City Council wisely commissioned a feasibility study to deal with such claims, and under the most realistic assumptions in that study, local conversion would achieve significant benefits in reduced costs and emissions. Defeat of Measure E would destroy any chance of achieving those benefits.

Its passage would also involve zero risk, because the measure does not commit the city to build anything, and the council will not do so unless its benefits are proven out.

Vote "yes" on E!

Walter Hays
Palo Alto
Let’s go anaerobic

Dear Editor: I appreciated Bryan Long’s letter regarding Palo Alto’s opportunity to convert its organic waste stream into renewable energy and high-quality compost (Post, Friday).

Most people aren’t aware that Palo Alto is one of only two communities in the state that still incinerates its sewage sludge.

This produces thousands of tons of carbon dioxide and uses about $800,000 worth of energy per year. Disposing of the waste ash, which is considered hazardous because of the high copper content, costs the city $234,000 per year.

By converting our organic waste (yard waste, food waste and sewage sludge) into biogas and compost, we could save this money and generate additional funds for the city. The biogas would be worth $1.4 million per year, the compost $588,000 per year, and the city would receive a tipping fee for receiving the waste/resource. Plus, we might even be able to sell the carbon credits.

An anaerobic digestion facility to process our organic waste would require about eight acres of the dump to be undecked from Byxbee Park. The park would still be 120 acres, and if we incorporated a green roof on top of the facility, the park would enjoy its full acreage.

Anaerobic digestion would help achieve three of the city’s priorities. It would save money (and perhaps even generate revenue), reduce our carbon footprint by as much as 25,000 tons per year, and help prepare us for emergencies (we could produce enough local energy to power 1,400 homes). This would have come in handy on February 17 when the power lines that transport electricity into the City went down.

The City Council will hold a study session on March 8 to consider this technology and others.

Park vs. ‘footprint’

Editor,

The Feb.17 power outage was a stark reminder that our reliance on imported electricity comes at a cost. When the grid goes down, we are vulnerable.

Fortunately, Palo Alto has an incredible opportunity to generate 1.6 megawatts of electricity (enough to power 1,400 homes) within the city limits through a process called “anaerobic digestion.” This technology could convert our 60,000 tons of organic waste (food and yard spills and sewage sludge) into biogas and compost, and allow us to retire our sewage sludge incinerator, which uses $800,000 worth of energy per year and creates a hazardous waste ash (the copper content is too high) that costs $234,000 per year to dispose of.

Anaerobic digestion has the potential to reduce our greenhouse gas emissions by 25,000 tons per year — 5 percent of our community-wide emissions. It would generate $1.4 million per year in energy sales and $588,000 in high-grade compost. During these tough economic times, converting our waste to resources makes great sense.

Opponents of this plan argue that it would interfere with the plan to convert our dump into Byxbee Park. However, the facility would require only eight acres of the 126-acre site, and could be built with a green roof that makes it virtually invisible from the park.

Undecking future parkland (aka the dump) would require a vote of the people, so this would be an opportunity for residents to say, “Yes, we want to dramatically reduce our carbon footprint while generating badly needed revenue and preparing our city for future emergencies.”

The City Council will consider this issue at a study session on Monday, March 8.

Peter Drekmeier
Palo Alto

Compost Initiative

Dear Editor: The Green Energy and Compost Initiative currently being circulated will continue Palo Alto’s leadership on climate change and also save the City money. Emily Kenzel’s letter Monday makes several incorrect claims about it. Specifically:

1. She claims that the small piece of landfill the initiative would dedicate would be “gone forever” and could be used for “whatever future councils want.” In fact, Section 5 of the initiative specifically limits the undecked land to the “exclusive” purpose of converting organic waste to compost and clean energy, and Section 7 provides that the council may redeck the property if it is not utilized for that purpose in 10 years.

2. She claims that the supporters of the initiative want to “gut” the existing design for the projected conversion of the landfill to a park. In fact, the initiative will (a) leave the design virtually untouched; and (b) generate funds (otherwise nonexistent) that could be used to implement it.

3. She argues that there has been no independent verification of predictions that the proposed facility would generate enough clean energy to power 1,400 homes while saving the City over $1 million a year. In fact, it was initiative supporters who persuaded the council, over the opposition of opponents, to hire a consultant to verify the facts.

Look for an opportunity to sign the initiative and be part of this important development.

Walter Hays
Palo Alto
Put compost proposal to a citywide vote

At issue is whether an ‘anaerobic digestion’ composting operation makes enough environmental and economic sense to undedicate 8 acres of parkland.

Another “only in Palo Alto” kind of political debate comes before the City Council Monday night, one that promises to divide environmentalists and confuse many others.

At issue is whether the value of having a new-technology, local composting system outweighs the loss of 8 acres of dedicated parkland adjacent to the city’s Wastewater Treatment Plant at the end of Embarcadero Road.

Palo Alto's compost dilemma deepens.

The future of Palo Alto’s composting returned to the spotlight March 21 as more than 100 residents packed into City Hall to make their cases on whether the city should build a waste-to-energy plant in Byxbee Park.

The heated debate, which has pitted some of the city's greatest residents against one another, centers on a 9-acre site that currently houses the city's landfill and that is slated to become parkland when the landfill closes next year. The landfill also includes the city's composting operations, which means the city must have to ship its compost elsewhere in about a year.

A coalition led by former Mayor Peter Drucker supports a new anaerobic digestion facility, which would convert yard trimmings, food scraps and sewage sludge into energy. A group that includes conservationists Emily Renzel, Tim Jordan and Randi Pearson think the city should keep industrial facilities away from local parks.

Last week, Drucker's group submitted 6,000 signatures to the City Clerk's office to place the land-use issue on the November ballot. If voters support the measure, the parkland would become eligible for hosting a new anaerobic digestion facility.

After a discussion that lasted close to four hours, the council agreed to return to the subject next month and give staff further direction. Staff and Alternative Resources, Inc., plan to present a draft feasibility study in June and to release the final study in the fall.

Yes on E, with caution

Measure E will allow, but not require, exploration of innovative alternatives to trucking yard clippings and food waste to San Jose or Gilroy.

It is difficult to imagine any other city engaging in the kind of hard-fought battle that has characterized the debate over Palo Alto's Measure E, an initiative that does nothing more than reserve 10 acres next to the sewage treatment plant currently designated as parkland as a possible site for a state-of-the-art composting facility.

Promoted by environmental activists who see an exciting possibility for the city to turn yard and food waste and the sludge from the sewage-treatment plant into compost and energy, Measure E asks voters to approve a land-use change to permit the acreage to be considered for an anaerobic digester facility if it proves feasible and desirable after a further study.

In search for Palo Alto landfill

A controversial proposal to turn 10 acres of dedicated Palo Alto parkland into a composting facility could end up in the hands of voters.

A group of composting advocates on Monday announced plans to collect signatures to place a measure on the November 2011 ballot that would ask voters to approve the construction of a cutting-edge anaerobic digestion composting facility in the Baylands.

The city has been searching several years for a new composting site to use once the landfill at
From: Bigbillcutler@aol.com
Sent: Monday, January 30, 2012 12:26 PM
To: Council, City
Subject: Green Energy and Compost Facility

I plan to be at the City Council meeting on February 6, and if public comments on the issue are to be accepted, I will make the following statement regarding the upcoming study on the baylands compost facility.

The study for the green energy and compost facility should address the following questions.

- Who are the stakeholders and what are their interests, concerns, values and priorities?
- How will solution options be created?
- How will the best option be selected? What are the selection criteria and what are the methods of analysis to be applied in evaluating options against criteria?

I strongly recommend that a formal study structure be set up to document answers to these questions and to verify substantial stakeholder agreement with the answers before proceeding to create and examine solution options. The benefits of this approach are twofold.

- It draws upon the collective knowledge and expertise of the community to create a better answer.
- It establishes community buy-in by a process of incremental consensus-building that will largely avoid serious disagreement with the final answer, marginalizing any die-hard critics who remain unconvinced.

Bill Cutler
February 1, 2012
Re: Staff Report re Byxbee Park/Measure E

Mayor Yeh and Members of the City Council:

Even though Measure E passed, the AD project is still one of the most expensive and probably least environmental projects ever thrust on a city as small as Palo Alto. Having said that, and with Measure E’s future still uncertain, there are actions regarding Byxbee Park that must occur now.

Staff alone cannot (or will not) devote the time to unravel the huge mess that E has generated. Therefore, more money is being asked to throw at these problems to just figure out how to proceed. So, it is probably the best direction to hire ARI to try to develop an action time line.

There are three actions that MUST be taken regardless of what ARI sets forth.

1. The Park, including the 51 acres, must be completed and the 10 acres must not be left out. Reconfiguration can occur when and if an AD project proceeds.

2. The windrow compost operation must cease. It is not legal to continue windrow activity on the park since it was only done as part of the active landfill. Staff has stated that enough dirt and compost has been acquired for the final vegetative cover.

3. A lot of noise and dust is being generated to keep the windrow compost operation going. The windrows were NEVER part of E. The proposed anaerobic digestion was presented to the public as an EXCLUSIVE use for the 10 acres. Windrow composting is not allowed by the Initiative to be placed on the 10 acres. Further, it is probably illegal to put the windrow operation anywhere else on the whole Byxbee Park.

I urge you to complete Byxbee Park as has been planned for decades.

Enid Pearson, Chair, Save the Baylands Committee
1019 Forest Court
Palo Alto, CA 94301