



2013

# Morrison Farm Well & Irrigation



CPA Application

Town of Acton

11/12/2013

# PROJECT APPLICATION FORM – 2013

**Applicant: Town of Acton**

**Submission Date: 11/12/13**

**Applicant's Address, Phone Number and Email**

**Purpose: (Please select all that apply)**

**Stephen L. Ledoux, Acton Town Manager**  
**472 Main Street**  
**Acton, MA 01720**  
**[sledoux@acton-ma.gov](mailto:sledoux@acton-ma.gov)**

- Open Space
- Community Housing
- Historic Preservation
- Recreation

**Town Committee (if applicable): Recreation Commission**

**Project Name: Morrison Farm Community Garden Well & Irrigation**

**Project Location/Address: 116 Concord Rd., Acton, MA**

**Amount Requested: \$20,000**

**Project Summary:** The Morrison Farm Community Garden requires a new water source that is independent of the Morrison House Town Water system. It is currently supplied via the Morrison household Acton Water District water hookup and meter. The Recreation Department pays the water bill via fees collected for Community Garden plot rentals. Because the house will eventually be turned over for household use, Municipal Properties Director Dean Charter has advised the Natural Resources Department to seek an alternative water source.

When Recreation consulted with the Acton Water District about installing a permanent water source for the Community Garden, District Manager Chris Allen recommended that this community garden operate from an independent well. Acton Town Water costs are on the rise. There is no guarantee that outside watering will be available in the future due to outside water use restrictions imposed on Town Water. A private well will provide a more cost effective and reliable source for the Community Garden, as opposed to expensive treated Town Water.

This project proposes that a new well be installed in the farm orchard area, supplied by an independent 200 amp electrical service from Concord Rd. to operate the well, and an irrigation system to deliver water to the garden plots.

## **Costs**

<b>Expanded electrical service</b>	<b>\$ 4,300</b>
<b>NSTAR pole and meter socket</b>	<b>\$ 5,000</b>
<b>Drilled Water Well, pump system, services</b>	<b>\$ 9,949</b>
<b>Irrigation installation</b>	<b>\$ 4,000</b>
<b>TOTAL</b>	<b>\$ 23,249</b>

## **Funding**

<b>CPA Funding request</b>	<b>\$ 20,000</b>
<b>Recreation revolving fund contribution</b>	<b>\$ 3,249</b>
<b>TOTAL</b>	<b>\$ 23,249</b>

**Estimated Date for Commencement of Project: May 2014**

**Estimated Date for Completion of Project: June 2014**

The Morrison Farm Community Garden is a success story. Demand for community garden plots has been on the rise over the past five years of its operation. The grounds are managed organically, with Rules and Regulations that require adherence to organic techniques and use of water conservation that follows the Acton Water District's May – October usage guidelines. Water conservation will continue to be practiced at Morrison Farm when the water source shifts to a private well, in keeping with the spirit of sustainability that underlies the development of this unique natural Town asset.

The cost of the new water source will be partially offset with over \$3,000 from Recreation revolving funds, a portion from which will come from annual Community Garden rental fees.

**Organic Community Gardens at Morrison Farm**  
**2014 Rules and Regulations**

**Morrison Farm Organic Community Gardens**

1. Morrison Farm, located at 116 Concord Road in East Acton, is an organically-managed 32-acre parcel that lies between Woodlawn Cemetery and Ice House Pond.
2. The Community Gardens are located behind the farmhouse and to the right of the barn. The Acton Recreation Department (978-929-6640) manages the Community Gardens. The Acton Recreation office is in the Acton Town Hall, 472 Main Street.

**Renting/Renewing Garden Plots**

1. A Morrison Farm Community Garden plot costs:
  - \$40 per plot per year for Acton residents
  - \$50 per plot per year for non-residents.Plot sizes are approximately 25' x 33'.
2. Payment must be by check, cash, or money order only. Make check payable to "Town of Acton". Garden plot fees are *non-refundable*.
3. Due to high demand, there is a limit of ONE plot per household.
4. For new gardeners: Acton Recreation rents available plots to the general public beginning at 8 A.M. on Friday December 13, 2013, in Acton Town Hall on a first-come, first-serve basis via walk-in only.
5. For renewing gardeners: Please note that if Acton Recreation has not received your renewal by 5:00 pm on Friday November 15, 2013, Acton Recreation will make your plot available to new applicants. Please note that current gardeners provided contact information for renewal mailing at time of registration. Acton Recreation is not responsible for misdirected or non-receipt of garden renewal notices.
6. If you rent a plot and then are unable to garden, please notify Acton Recreation so your unused plot can be reassigned. Gardens left unused or unattended are subject to non-renewal.

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Thank you for supporting Acton Recreation. If you have any questions, or concerns, please contact our office at (978) 929-6640. All garden rules and regulations are found on the Town of Acton website [www.acton-ma.gov/recreation](http://www.acton-ma.gov/recreation) located under "General Information".

## **Garden Rules**

1. Plots are available for use Saturday, April 19, 2014, through Sunday, November 2, 2014.
2. As a gardener, you must:
  - use only insecticides and fungicides listed by OMRI (Organic Materials Review Institute – [www.omni.org](http://www.omni.org)) or WSDA (Washington State Department of Agriculture – [www.agr.wa.gov](http://www.agr.wa.gov)), or organic home-made remedies
  - use only biodegradable mulches (i.e., no black plastic)
  - share with all gardeners any manure donated by MCI Concord
  - abide by Acton Water District Watering Restrictions:
    - watering WITH HOSES on Tuesdays, Thursdays, and Saturdays ONLY.
    - watering with watering cans on any day.

There is no assurance that water will be available throughout the summer.

  - deposit all garden debris in the areas provided, e.g., place compost and stones in “Compost” and “Stone” containers, respectively. There is no trash service provided—this is a carry-in / carry-out facility.
  - keep all pathways clear for mowers. Do not put rocks, weed clumps, corn stalks, tools, chairs, or structures on mowed pathways.
  - remove man-made materials: cages, stakes, fences, etc., by November 2, 2014. Do not remove wooden or metal plot boundary stakes.
3. You may not:
  - use herbicides.
  - extend your garden beyond your assigned plot boundaries. Any planting done in this manner will be removed.
  - Borrow privately-owned tools or hoses from other plots without the owner’s permission.
4. Perennial plants are not advised; there is no assurance of having the same plot annually.
5. Dogs are not permitted inside the fenced garden area.

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Rogan Electric LLC  
 84 Seminole Road  
 Acton, MA 01720

# Proposal

Date	Estimate #
9/27/2013	418

Name / Address
Melissa Rier Acton Town Hall 472 Main Street Acton, MA 01720

Terms

Qty	Description	Total
1	<p>Morrison Farm</p> <p>Upgrade existing house electrical service from 100 amp to 200 amp.</p> <p>Run power from house to well pump location (estimate 100 feet from house) in PVC conduit. Trench and back filling by others. Pump and controls by others.</p> <p>Wire and conduit is only sized to power the well pump, no additional loads.</p>	4,300.00
<b>Total</b>		<b>\$4,300.00</b>

If you have any questions concerning this estimate, please call Tom Rogan at 978-804-2557.

Thursday, August 29, 2013



Acton Community Garden  
116 Concord Road  
Acton, Massachusetts

**Skillings & Sons, Inc.**<sup>TM</sup>  
*Bringing water well technology to a whole new level*

116 Concord Road, Acton Massachusetts

Dear Ms. Rier,

Skillings & Sons Inc. is pleased to offer you a proposal for a drilled water well, pump system and services for the above referenced site.

Based on an average well depth, casing and services, the following is an estimate only and is not the final cost of your well (Please refer to the last page of this document for local well data). The final cost cannot be calculated until the well is drilled, the proper pump size is selected and services are calculated. Pump size and depth of installation are determined by the well depth and flow rate. A well should produce 5 gallons per minute for 4 hours to pass most town requirements. A wells capability of producing this flow rate depends on both its depth and flow. As the depth increases, the flow rate needed decreases. For example, a 100' well should produce 8GPM, 150'-6GPM, 200'-5GPM, 300'-4GPM, 400'-3GPM, 500'-2GPM.

Well Drilling Permit .....	\$ 70.00
6" Drilled Well to 540' at \$10.00/Ft.....	\$ 5,400.00
50' of 6" Well Casing at \$15.00/Ft.....	\$ 750.00
6" Drive Shoe.....	\$ 125.00
Pump System: 1HP pump with 35 gallon tank .....	\$ 3,174.00
Pump Test .....	\$ 325.00
Lab Analysis .....	\$ 105.00
<b>Estimated Cost .....</b>	<b>\$ 9,949.00</b>
<b>Deposit Amount.....</b>	<b>\$ 3,300.00</b>

\*Installation and removal of temporary pump: \$450.00

\*Additional labor for hook up: \$128.00/hour plus the cost of materials

\*If drilling exceeds a depth of 1000', the rate will increase to \$14.00 per/ft

**DEFINITIONS AND ADDITIONAL COSTS DETERMINED AFTER DRILLING**

**Offset Piping from well to house (50ft included, additional per foot)..... \$ 4.75**  
*Offset piping is the piping conduits between the well and house. Most proposals will have a set distance that is included in the well installation. Any distance beyond the original proposal is by the foot that will be added to the final invoice.*

**Mud Rotary ..... \$ 450.00**  
*Mud Rotary is a process that uses a sealant to keep surface water contamination from entering the well. Mud Rotary is used on Non-Conforming wells and/or if the overburden is loose and the borehole may collapse before we can set the casing. In most cases we do not know if this will be necessary until the drilling process is started.*

**Hydrofracking..... \$ 1,800.00**  
*Hydrofracking is a process that uses water under high pressure and volume in attempt to increase the gallons per minute of the well.*

**Excavation**  
*Excavation is excluded in this contract. All Digging, backfilling, excavation labor and all necessary fills are to be provided by others and coordinated with Skillings & Sons, Inc. If it becomes necessary for Skillings & Sons, Inc. to provide this service it will be billed accordingly at the time of invoice. Please check the box for the desired upgrade.*

- Backhoe move charge (This is the cost to get the equipment to the site) ..... \$ 195.00
- Backhoe labor charge (This is the cost per hour the machine is on site) .....\$ 105.00

**Pump Test**  
*A pump test is to determine the flow rate of the well. A generator will be set to operate the well pump and the system will be pumped to determine a flow rate. This process can also include flushing the well of chlorine so water samples may be taken prior to bringing the water into the home.*

**Pump Systems**  
*Additional cost to be added to the invoice for upgraded costs from original pump size. The size of the pump is dictated by the recovery rate and depth of the well. For example: If a ½ HP Pump is chosen as the preferred pump system and due to a low yielding well we need to place a larger pump deeper to utilize the storage of the well column, the below costs will be added to the invoice. Skillings & Sons, Inc. can make recommendations regarding the proper pump size after the well is drilled. Please check the box for the desired upgrade.*

- 1HP to 1-1/2HP ..... \$ 580.00
- Constant pressure pump system upgrade (covers up to 1 hp) .....\$ 990.00
- Constant pressure pump system upgrade (covers 1 ½ hp - 2 hp) .....\$ 1,190.00

**Tank Upgrades**

*Additional costs to be added to the pump system package price. A larger pressure tank will make the well pump cycle less often and help extend the life of the well pump. Please check the box for the desired upgrade.*

- 35gal to 50gal ..... \$ 130.00
- 50gal to 65gal.....\$ 260.00
- 65gal to 90gal..... \$ 445.00

**Flood Protection (On Site Performing Pump System Installation)**

*This is a water system shutoff device to shut down power to the pump in the case water is detected on the basement floor. This device disconnects power to the pump so no water can continue to be pumped out of the well. Any water in the pressure tank already will be evacuated from it, but no new water (from the well) will be allowed to enter..*

*Please check the box for the desired upgrade.*

- TEC Innovators ~ Water Leak Detection System ..... \$ 375.00

**EXCLUSIONS (not included in contract)**

- The well drillings will be left on-site. These solids can be removed by Skillings & Sons, Inc. Please talk with your priceject manager about logistics and any additional charges that may apply.
- All electrical connections will be made by a licensed electrician (material and labor provided by others). These connections will be made from the well head to storage tank or control area.

**NOTE**

- Skillings & Sons, Inc. will notify Dig Safe Systems, Inc. before conducting underground digging; however Dig Safe Systems, Inc. does not mark all underground utilities. If we damage any underground piping or electrical that is not identified by Dig Safe Systems, Inc. or by our customer we are not liable. We will attempt to make the repair and additional charges may be incurred.
- Skillings & Sons, Inc. does not guarantee the quality or quantity of water, if any, obtained by drilling. *(If necessary, one bacteria retest will be performed at no charge).* In the event the well water quality has primary and/or secondary contaminants we have a full service water treatment division to help solve your water quality issues.
- Skillings & Sons, Inc. will attempt to minimize damage to the driveway, shrubs and lawn, but due to the size of the equipment needed to drill a well, some damage may occur. Skillings & Sons, Inc. is not liable for repairs. Please note that we will not reseed or reloam the area. Skillings & Sons, Inc. will not landscape the area affected by the well installation process. The area will be backfilled and graded to the best of our ability to pre-work conditions if excavation is included in the contract.
- Skillings & Sons, Inc. will not be responsible or repair any damaged irrigation lines.
- Skillings & Sons, Inc. cannot take responsibility of well location without a septic plan. Customer agrees with the location of the well.
- Prices quoted will be honored for 30 days from the date of this proposal.

**PAYMENT SCHEDULE**

- The balance, for completed work is due upon receipt of invoice. You may hold back \$400.00 until the offset and tank are installed.
- Lab results will not be released until account is paid in full.
- All applicable state taxes will be added at the time of billing.
- Interest is 2% monthly on all past due balances.
- Customer agrees that any collection costs and attorney fees will be the responsibility of the customer.

**ADDITIONAL NOTES:**

- A shed/pump house should be supplied by the customer for the housing of the pump system components (i.e.: Tank, Controls, VFD, necessary filtration). Power requirements in the shed will be a 110V outlet for service tools and electric light and a subpanel with 230V capacity. At this time a 25-30 Amp two poll 230V breaker is needed to supply the pump system.
- Ideally, this structure should be close to the garden and to the location of the proposed well
- Attached is an orthographic photo of the property
- Attached is a review of well data in the area

**ACCEPTANCE OF PROPOSAL:** Please sign and return a copy of this contract to Skillings & Sons, Inc. with your deposit. Upon receipt of the deposit and signed contract, we will promptly place you on the schedule

Signature: \_\_\_\_\_  
Printed Name: \_\_\_\_\_  
Date of Acceptance: \_\_\_\_\_  
Property Owner's Name: \_\_\_\_\_  
Property Owner's Address: \_\_\_\_\_  
Property Owner's Phone: \_\_\_\_\_  
Cell Phone: \_\_\_\_\_  
Alternate Phone: \_\_\_\_\_  
E-Mail: \_\_\_\_\_



James David Morey  
Project Manager  
Skillings & Sons, Inc.  
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Amherst, NH 03031

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Web Site: [www.skillingsandsons.com](http://www.skillingsandsons.com)



Please be advised:

Local well data contributed to the development of the 540' estimate. I averaged the 5 closest wells reported on the Mass DEP web site. Below are the results that I found.

House	Well Depth	Length of Casing	Well Recovery Rate
#1	525	90	40
#2	535	25	15
#3	505	40	4
#4	600	22	15
#5	540	50	15
Average	541	45	17.8

## Catherine Fochtman

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**From:** Charles Aaronson [charlie@charlieaaronson.com]  
**Sent:** Friday, September 20, 2013 6:58 PM  
**To:** Catherine Fochtman  
**Cc:** Tom Tidman  
**Subject:** Larry Flannery Irrigation Quote

Hi Cathy,

I have attached the Larry Flannery quote and I have some added notes here.

- 1) Note that the garden plot plan on the second page does not include a spur out to the orchard and that his quote of \$3351.00 includes 2x4 posts and key turn vandal proof bibs. I would substitute lever action ball valves and 4x4 posts and a spur out to the orchard which will raise the cost but should still keep it under \$4000.00.
- 2) I still think that we should proceed with immediately adding a tap to the Concord Road well so that we can get a clean sample for testing. When (if) a sample passes the test for potability, we will then have a fallback position.
- 3) Flannery plan (not documented) includes a diagonal line across the area behind the Robbins cellar hole to the gardens. If we were to change that to be parallel to the street and then make a 90° turn to get to the gardens, that should add less than \$500.00 more.
- 4) Roughly speaking then, the Flannery plan would come in at less than \$21500.00.
- 5) All of the above assumes that we can get agreement from the Cemetery Commission to run the lines and that the situation would remain stable for the foreseeable future.
- 6) Given the above, if we were to instead choose to dig a new well, the costs would be the Skilling costs for the well, plus any ancillary costs for bringing in electricity etc, plus the Flannery cost of \$4000.00 for the plumbing and valves in the gardens.

Let me know if there are any other things that I may have left out.

Charlie A.

**Morrison Farm water project Proposal:**

**Install 8 taps or bibs using key turn vandle prof bibs for garden area mounted on 2x4 pressure treated posts, 420' 1"poly NSF all necessary fittings with gate valve for service.-3351.00**

**Install 1.5"PVC main line from end of irrigation main to garden area with 2 gate valves for service,all pipe and fittings.-5380.00**

**My suggestion with irrigation systems ageing valves is to run 1.5"PVC to well head area add master valve for irrigation only when irrigation clock turns on it charges irrigation main line and zones.-1858.00**

**Change pump controller to a constant pressure system,1 VFD,50 gal fiberglass tank,all piping and pressure sensing equipment and connections.-8675.10**

**Shed to mount tank and VFD wood construction (price may change with town codes and floor mat.) -975.00**

**All areas will be seeded after trenching.**

**Total cost for all = 20239.10**

**Cost from end of main line = 18381.10**

**Larry Flannery  
Flannery Irrigation  
PO Box 477 Stow,MA  
978-562-8616  
flanneryirrigation@verison.net**

