

PROJECT PROPOSAL
For the
RESTORATION OF THE TROY SPRING

BACKGROUND:

The *Spring* located on Spring Avenue in Troy, New York has provided a wonderful source of potable water for the residents of the City and surrounding communities dating back to the turn of the 17th century. Today, it is estimated over 100,000 visits are made annually by users who have come to enjoy the refreshing properties of its water coupled with lively discourse found among its beneficiaries.

As the fifth generation from our family to be blessed with such a precious resource, I have routinely accompanied my father to the *Spring* to fill up our water jugs since 1995. During this time, I have noticed a considerable deterioration in the condition of *Spring*. The stone marker indicates that the last major improvement of the Spring appears to have occurred some forty years ago in 1967.

Since completing the Hugh O'Brien Leadership (HOBY) Training hosted by the Rensselaer Polytechnic Institute in May 2008, I have searched for opportunities to improve my community. The restoration of the *Spring* is a necessary and worthwhile project to ensure that future generations will also have the opportunity to enjoy the simple pleasure of the *Spring*.

PROBLEM STATEMENT:

Located on the eastern side of Spring Avenue about 1000ft. north of the intersection with Walker Drive (Little League), the *Spring* is situated on approximately a ½ acre parcel (including a 100' x 50' parking lot) owned by the City of Troy. Year-round public access, landscaping, & refuse pick-up is provided by the City of Troy as illustrated in Figures 1 and 2. It should be noted that the City makes no guarantee nor takes any responsibility for the quality of the water.



Figure 1



Figure 2

A three-sided, pre-cast, masonry retaining wall approximately (15ft x 12ft x 12ft) in length and 2.5ft in height is located at the base of the east slope of the Spring Avenue ravine. The ravine is cut into shale and covered with clay hardpan. Six – 1 inch steel pipes protrude out approximately 6 inches through the masonry wall providing access to the water behind the retaining wall. The flow rate taken during February 2009 approximates .5 GPM.

The following is a list of issues for consideration during preliminary design:

1. The deteriorating condition of the retaining wall ...cracking & crumbling as illustrated in Figure 3.



Figure 3

2. The additional stress being put on pipes by users who are placing the neck of 5 gallon containers directly on the pipe in order to fill the container. The current layout is designed to handle containers ≤ 18 inches in height. Design alternatives might consider making adjustments to the height of the pipe from the ground to handle containers up to 30 inches or changing the pipe configuration to prevent containers from being braced on the pipe during the fill-up.
3. Alternatives to improve water flow rates. The flow rate may be currently inhibited by infiltration of fine sand, and clay behind the wall.
4. Alternatives to improve access for the elderly and handicapped. This may include improvements in the walkway (slope & surface), installation of handrails, and the designation of a handicapped parking area.
5. Alternatives to mitigate damage to the vegetation by vehicles backing down to the spring along with tree root damage in the parking lot as illustrated in Figure 4.



Figure 4

6. Alternatives to improve drainage & landscape.

PROJECT APPROACH:

The Project is organized into four phases: Project Design, Community Outreach, Organization, and Construction. Figure 5 provides an initial timeline for the project pending the outcome of preliminary design alternatives.

Key to the Project Design Phase is the recruitment of a qualified volunteer(s) to provide the necessary engineering expertise to accomplish the goals of the project. Rensselaer Polytechnic Institute will be contacted to see if the Schools of Earth & Environmental Sciences, Civil & Environmental Engineering or Architecture would be interested in participating in this project. If RPI is unavailable, inquiries will be made to other institutions and local engineering/architectural firms.

Public Outreach will be accomplished through a combination of the Internet, print media and public meetings. A local web site developer has volunteered to help develop the web page for reaching out to the community for ideas, support/approval, volunteer base, progress reporting and any required fundraising. The City of Troy, public officials, community leaders, and civic organizations including the South Troy and Little Italy Community Groups will be contacted to ensure public support and project feasibility.

A not for profit organization will be initiated should efforts to utilize an existing organization within the city for fund management prove unfeasible. Volunteers from the community will be recruited to help with Design & Construction. Funds and construction materials will be raised as part of an awareness campaign that will include a combination of the internet, newspaper, phone, and person to person outreach. The potential for a government grant will also be explored.

A contractor will be selected in consultation with the project designer, City of Troy and community leaders. Construction is expected to be started during the summer of 2010 and completed by September.

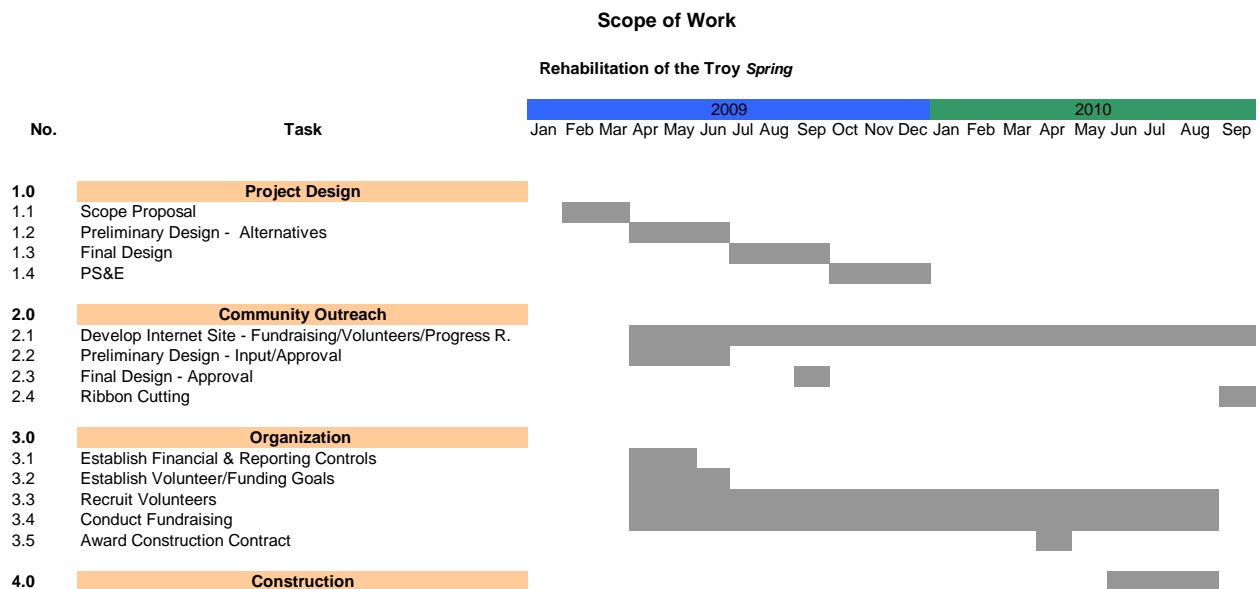


Figure 5 - Timeline: March 2009