

DAVID E. ROSS ASSOCIATES, INC.

Civil Engineers, Land Surveyors, Environmental Consultants

April 3, 2000

Fire Chief Bruce Baker
Sterling Fire Department
7 Cross Street
Sterling, MA 01564

via facsimile (978) 422-7832

Re: Project Status, Sterling Fire Station Expanded Feasibility Study
The Carell Group Architects,
Ross Associates Project No. 11770

Dear Chief,

I apologize for being unable to make tonight's meeting. In lieu of my attendance, I would like to summarize the status of the project and its anticipated status a short distance "down the road."

As you are aware there are two significant unknowns that impact the complete determination of the feasibility of the existing fire station site being developed: subsurface conditions (borings) and the ability of the site to support an on-site sewage disposal system. I will address these separately.

SUBSURFACE CONDITIONS:

The existing Fire Station is experiencing uneven settlement which is suspected to be due to peat or other un-suitable conditions below the building. The architect's feasibility study accommodates standard footings and some remedial work to ensure that settlement won't occur in the new building. A determination of the subsurface condition(s) need to be explored to ensure that excavation and foundations will not cause a significant cost over-run on the project budget.

We have been in communication with Mr. Chandler, Chairman of the Building Needs Committee. It is our belief that this office, coordinating with that of The Carell Group Architects, Inc. can have answers to these questions within thirty days of your authorization to proceed. We will, on the Committee's behalf, conduct the necessary borings to determine the subsurface conditions in the area of the addition. These Borings will be used by the structural engineer in their design of the footings and will be used jointly by this office and The Carell Group, Inc. in estimating costs not accommodated in the original site/excavation estimate.

111 Fitchburg Road P.O. Box 368 Ayer, Massachusetts 01432-0368
978-772-6232 978-368-1065 978-448-3916 FAX 978-772-6258
E-Mail: derinc@ma.ultranet.com Home Page: <http://www.ma.ultranet.com/~derinc>

Project Status, Sterling Fire Station Expanded Feasibility Study
The Carell Group Architects,
Ross Associates Project No. 11770
Page 2.

SEWAGE DISPOSAL SYSTEM:

The Station's existing Sewage Disposal System cannot serve the new facility. The facility once built must meet the requirements of "new" construction. Accordingly, a new system must be built. We were not able to find any land near the station to (other than the park) that is big enough and has sufficient soils.

We have completed the testing necessary to design a leach field on the park area. We have a meeting with the Sterling Board of Health scheduled for April 12th, at which time we will present our design scenario to that Board for commentary. Immediately after that meeting we will incorporate the Board's comments into a finalized design.

We know some of the basic design criteria as set by Code and past conversations with the Board of Health. These are:

- Maximize offset to existing wells and septic systems.
- Maximize offsets (as required by code) to property lines
- Design the system to require the minimum number of "waivers or variances" to code.
- The system will incorporate a nitrogen reduction (minor treatment) into the design.

The tentative design meets the criteria listed above. It accommodates the full expansion to the Fire Station, as proposed and provides the Old Town Hall with the following flow capabilities:

Old Town Hall: 2 floors (6,000 sq.ft.) and
 Meeting room 70 ± people.

It is our belief that this is a reasonable re-use scenario for the Old Town Hall for a variety of reuse schemes.

Combined Facility:

It has come to our attention that it is being considered not to tie-in the Old Town Hall to the system, in order to save money. We cannot recommend this alternative course of action. It is short sighted and in the long run cost inefficient. Further, the Board of Health was clear that this is not a desirable solution and can, require the tie-in for the Old Town Hall.

The system size was reverse engineered (make design meet flow regime). Treatment of the effluent will be required as the site is tributary to the Wachusett Reservoir, the system will be the same general size (cost) and in the same location. If we were to put out to bid the addition of the Old Town Hall at a later date, the additional cost would be significant (50-80% of the base bid cost). To accommodate the Old Town Hall in this design scenario adds no more than 10- 15% of the base cost (.\$ 20,000 – 30,000)

Permit Process:

Given the status of the project to date, we anticipate having a design for permitting to the Board of Health this month. The Board has 45 days to review the design and issue a permit. If an additional permit is required from the Department of Environmental Protection(DEP), then an additional 60 – 120 days will be required.

DAVID E. ROSS ASSOCIATES, INC.

111 Fitchburg Road P.O. Box 368 Ayer, Massachusetts 01432-0368
978-772-6232 978-368-1065 978-448-3916 FAX 978-772-6258

E-Mail: derinc@ma.ultranet.com Home Page: <http://www.ma.ultranet.com/~derinc>

Project Status, Sterling Fire Station Expanded Feasibility Study
The Carell Group Architects,
Ross Associates Project No. 11770
Page 3.

This office would not propose to submit a plan to the Board of Health or DEP if we did not believe a permit is achievable. The site has demonstrated suitable soils and the effluent stream is capable of being treated (using low level technology) to meet applicable standards. This technology is commonly used and accepted by the DEP. We do not anticipate permitting issues. We will know the Board of Health's requirements after our April 12th meeting.

Summary:

1. It is our belief that the design process is capable of meeting the applicable criteria of the Sterling Board of Health and Title 5 of the State Sanitary Code.
2. The tying in of the Old Town Hall is prudent and cost effective.
3. The construction documents will require 6-8months to complete. By this time the Sewage Disposal System permits will be issued.

Please do not hesitate to contact the undersigned regarding this matter.

Sincerely,
David E. Ross Associates, Inc.

By:


William E. Murray, L.A.
Project Manager

DAVID E. ROSS ASSOCIATES, INC.

111 Fitchburg Road P.O. Box 368 Ayer, Massachusetts 01432-0368
978-772-6232 978-368-1065 978-448-3916 FAX 978-772-6258
E-Mail: derinc@ma.ultranet.com Home Page: <http://www.ma.ultranet.com/~derinc>