

Dear Vern,

April 4, 2012

At our meeting on March 21, continued wrestling with the costs estimate was a major topic. This relates to seeking future financing and to our immediate task of preparing the construction documents. I suggested that the way to move forward is to focus on the exterior envelope and the work necessary to address building code mandates for Option G. A happy outcome is that the historic staircase does get reconstructed as the restrooms. However, a number of items are trimmed, although remain as options that could be accomplished in the future and are not included in the CD set now being prepared. For example, the restoration of the original double leafed doors at the front entry and the ramp to the front door are deferred; this will entail a variance from the Mass. Architectural Access Board. Of course, there will be the new accessible entrance and the existing rear ramp to the first floor. Also postponed are exterior shutters, the restoration of the louver at the façade pediment, air conditioning, new acoustical tile ceilings, acoustical insulation between floors, surface refurbishment, we are only painting one elevation of old building.

We have prepared a modification of the February 15, 2012 cost estimate based on that assumption. Attached is a PDF of the amended cost estimate, which is the basis of the design work now underway. Just under \$540,000 has been eliminated so the grand total is now \$1,772,190. This has been accomplished by focusing on the work necessary for the addition and code mandates. In the PDF, modifications have been highlighted. Deleted items have a negative number shown in Red adjacent to the Total line.

Reduced numbers are the same with a note adjacent to the description explaining the reduction amount. Increased items (drywall ceiling for second floor instead of Ecophon acoustical ceiling) have a black number indicating the increase, and a note saying what the increase was next to the description. Alternates 1, 2, and 3 will not be included in our Construction Document package. We used AM Fogarty's excel file and only modified the cover, highlighted, to show that we modified it while giving them credit for the original.

Concerning the Sanitary System, we are assuming that connection to the Fire Station, the option you have long discussed and have planned for future sanitary use. This is a known option and thus a conservative choice.

As you know the report was sent out by disc as the documents was too large to email. We would appreciate your comments so we can wrap that up.

We appreciated receiving payment for our January 12 invoice. We are working intensively on the construction documents and expect to have a 90% draft in hand by the first week of May.

I am wondering if our attendance is necessary on April 18. Quite honestly I think the project is better served by working on the CDs. As you have also observed the process of arriving at the design option and a scope of work which seems within reach was prolonged, even while we all wanted to think as broadly and deeply as possible about how to revive the historic elements while creating a functional building that contributes to community purposes.

Please let me now if you have any questions – I am in the office all afternoon,

LYNNE SPENCER

PRINCIPAL, HISTORIC PRESERVATION

menders, torrey & spencer, inc.

123 North Washington Street

Boston, Massachusetts 02114

ph: 617.227.1477 ext: 110

fax: 617 227.2654

Sterling Old Town Hall
Sterling, MA

February 15, 2012

GRAND SUMMARY

RENOVATION/ADDITION		\$1,735,612
HAZARDOUS WASTE REMOVAL		\$30,250
SITE IMPROVEMENTS		\$49,535

TOTAL DIRECT COST		\$1,815,397
GENERAL CONDITIONS	6.5%	\$118,001
GENERAL ADMINISTRATIVE O&P	5%	\$96,670
P&P BOND	1.5%	\$30,451
DESIGN CONTINGENCY	10%	\$206,052
ESCALATION (summer 2012)	2%	\$45,331

TOTAL CONSTRUCTION COST		\$2,311,902
COST PER SF		\$245.89

BREAKOUT COST WHICH ARE INCLUDED ABOVE:

1. BASEMENT FIT-OUT	see alterante
2. ADDITION	\$500,000
3. FRONT DOOR AND NE RAMP	\$63,400
4. HISTORIC STAIRCASE	\$19,750
5. ROOFING AND REINFORCEMENT	\$236,000
6. SHUTTERS ON EXISTING BUILDING	\$31,062

ALTERNATES

ALTERNATE NO. 1- RELOCATE BRICK HISTORIC ONE STORY OUTBUILDING	\$53,614
ALTERNATE NO. 2 - SLOPED WALKWAY AND PLAZA - NORTHWEST	\$18,624
ALTERNATE NO. 3 - FIT-OUT IN SOUTH END OF BASEMENT	\$35,817
ALTERNATE NO. 4 - SUBSTITUTE ASPHALT SHINGLE ROOF FOR SLATE SHINGLE ROOF	(\$105,732)

PROJECT: Sterling Old Town Hall
 LOCATION: Sterling, MA
 CLIENT: Menders Torrey & Spencer, Inc.
 DATE: 15-Feb-12

NO. OF SQ. FT.: 9,402
 COST PER SQ. FT.: 184.60
 *GSF Excludes Balcony, Attic Space and Existing Ext. wall

No.: 12004

RENOVATION/ADDITION

SUMMARY	DIVISION TOTAL	PERCENT OF PROJECT	COST PER SF
DIVISION 2 - SITEWORK	58,896	3%	6.26
DIVISION 3 - CONCRETE	36,064	2%	3.84
DIVISION 4 - UNIT MASONRY	125,198	7%	13.32
DIVISION 5 - METALS	11,500	1%	1.22
- MISCELLANEOUS METALS	28,776	2%	3.06
DIVISION 6 - WOOD AND PLASTICS	196,306	11%	20.88
DIVISION 7 - THERMAL MOISTURE PROTECTION			
- WATRPRF,DAMPRF,& CAULKING	10,765	1%	1.15
- INSULATION	33,876	2%	3.60
- ROOFING AND FLASHING	150,087	9%	15.96
DIVISION 8 - DOORS AND WINDOWS	43,150	2%	4.59
- WINDOWS	27,235	2%	2.90
- GLASS & GLAZING	4,000	0%	0.43
DIVISION 9 - FINISHES			
- GYPSUM DRY WALL	67,830	4%	7.21
- TILE	18,508	1%	1.97
- ACOUSTICAL TILE	109,240	6%	11.62
- WOOD FLOORING	23,790	1%	2.53
- RESILIENT FLOORING	4,876	0%	0.52
- CARPET	13,148	1%	1.40
- PAINTING	81,294	5%	8.65
DIVISION 10 - SPECIALTIES	21,175	1%	2.25
DIVISION 11 - EQUIPMENT	0	0%	0.00
DIVISION 12 - FURNISHINGS	8,195	0%	0.87
DIVISION 13 - SPECIAL CONSTRUCTION	0	0%	0.00
DIVISION 14 - CONVEYING SYSTEMS	124,000	7%	13.19
DIVISION 15 - MECHANICAL			0.00
- FIRE PROTECTION	69,233	4%	7.36
- PLUMBING	63,500	4%	6.75
- HVAC	144,724	8%	15.39
DIVISION 16 - ELECTRICAL	260,246	15%	27.68
TOTAL DIRECT COST	1,735,612	100%	184.60

SANITARY SYSTEM OPTIONS

Option 1: Connect to existing leach field and septic tank located at Fire Station.

- Utilizes an Innovative Alternative System which allows for increased loading with a reduction of total nitrogen.
- Surveying & legal fees required to obtain necessary easements for the sewer force main. Approximate 450 LF of trenching from Old Town Hall to Waushacum Ave.
- Special permit required from DEP. These permits are not guaranteed.
- Cost estimate for system is \$120,000
 - I/A System: \$55,000
 - Force main and pump chamber: \$27,500
 - Surveying and legal fees: \$10,000
 - Engineering fees: \$27,500

Option 2: Upgrade existing system on Old Town Hall site.

- New septic tank, pumping chamber and leaching field.
- Calculation of gallons per day required from Board of Health. (In process)
- Building occupancy will be limited by gallons per day. Likely between 150 and 250 people.
- Cost estimate for system is \$53,000
 - Septic System: \$40,000
 - Engineering fees: \$13,000

MASSACHUSETTS PRESERVATION PROJECTS FUND - GRANT OPTIONS

Option 1: Roof, Structural Augmentation and Windows

Replace roof with the following options
 Reinforce roof trusses
 Remove drop ceiling in second floor.

Options are:	<u>Slate</u>	<u>Synthetic</u>	<u>Asphalt</u>
○ Roof & Structure:	\$236,000	\$211,700	\$130,268
○ Windows:	\$35,000	\$35,000	\$35,000
○ Repair total:	<u>\$271,000</u>	<u>\$246,700</u>	<u>\$165,268</u>
○ Architecture/Engineering fees:	\$30,500	\$30,500	\$30,500
○ Project Total:	\$301,500	\$277,200	\$195,768
Current match	\$17,500	\$17,500	\$17,500
Need from Town Meeting	\$284,000	\$259,700	\$178,268

Option 2: Windows, Doors, & Masonry.

Restore windows	\$35,000
Restore front door and install HC ramp	\$63,400
Repoint foundation interior & exterior	\$73,300
Repair Total:	<u>\$171,700</u>
Architecture/Engineering Fees:	\$20,500
Project Total:	\$192,200
Current match	\$17,500
Need from Town Meeting	\$174,700

Thomas Burgess

From: Jesse Johnson [jjohnson@davidross.com]
Sent: Wednesday, February 29, 2012 10:12 AM
To: Thomas Burgess
Subject: RE: Sterling

Tom,

For your meeting tonight I wanted to update you on what I have found out so far. As I mentioned, you have two possible options for sewage disposal for the renovated Old Town Hall. Disposal at the fire station property will be referred to as Option 1. Disposal within the property limits of locus will be referred to as Option 2. Below I will list some of the details to consider for each option and a recommended approach to continuing the project.

Option 1

When the fire station was renovated and expanded in 2005, there was extra capacity built into the leach field and an extra 2,500 gallon septic tank was installed. This work was done in a planning effort to potentially tie-in the Old Town Hall when it was time to renovate it. The leach field was sized based on the maximum allowable flow for a Zone II and combined area of the fire station parcel and the Old Town Hall parcel. When the research was performed during the planning stage (1999-2002), it was determined that the best option for sewage disposal was use of a proprietary Innovative Alternative (I/A) System. This typically allows for a increased loading and reduction of total nitrogen as required with sewage disposal systems for new construction in a Zone II. The I/A system selected at that time was the MicroFAST 3.0 by Bio-Microbics, Inc.

The DEP had an approval letter at the time that allowed for provisional use with non-residential development under 2,000 gpd. It also allowed for a loading of 660 gpd/acre if the system was installed. Without it, loading is only allowed at 440 gpd/acre in a Zone II. The provisional approval means that only 50 total systems can be installed in the state and must be monitored quarterly for effluent quality. This is the DEP's way of saying they are not completely comfortable with the system yet and want to see long term results before they upgrade the approval status. That is the case with all I/A systems for Zone II use with the exception of recirculating sand filters.

I contacted Bio-Microbics and asked for a quote to install a system suitable for this application. I also reviewed the latest approval letter from the DEP for this particular I/A system. The system is only approved for a 550 gpd/acre loading now and still requires quarterly monitoring and reporting. Also, Bio-Microbics stated that two additional tanks with treatment systems would be required on-site to meet the treatment parameters stated in the approval letter. They quoted a cost of \$40,000 plus tanks, electrical, and site work. I estimate those additional appurtenances at \$15,000. Additional costs are needed to connect the sewer force main from a new pump chamber at the Old Town Hall to the stub at Waushacum Ave. That is about 450 linear feet. At a minimum that would cost at least \$50/ft for a rated project. There are costs (engineering, surveying, legal) associated with obtaining the necessary easements to install the sewer force main. That also assumes they will be granted. You will need a significant amount of engineering to develop construction documents suitable for public bidding and securing the necessary permits. A permit will be needed from the DEP to allow for a community sewage disposal system and nitrogen aggregation loading. These permits are not guaranteed and have to be proven as the only viable option for the project.

Based on the efforts listed above I would estimate a cost of approximately \$120,000 for Option 1. This assumes \$55,000 for the I/A; \$27,500 for the force main and pump chamber at Old Town Hall, \$10,000 for the surveying and legal to obtain easements, and \$27,500 for engineering to obtain the permits and develop construction documents.

Option 2

This option can be considered because there is an existing leaching field on the property for the building. If you don't increase flow to a system and simply want to upgrade it, then you are allowed to take local and state variances to make something fit. This "upgrade" status would allow you to select an I/A system if necessary to reduce the size of the leach field and/or separation to groundwater. An increase in loading is not viable due to the small lot size. The size of the system would be limited to the flow it is estimated at using today. This is the unknown for the site. There are no records regarding the estimated flow for the site or the current size of the leaching area. Therefore, you have to work with the Board of Health on determining a reasonable design flow for the existing building. That would be based on the square footage and use on each floor. I contacted the Sterling Board of Health agent and discussed this option with him. He agreed that it was viable and just needed to think about how to calculate the size.

I found notes in our files regarding the floor layout and uses for the building. The first floor was calculated at 1,672 s.f. of office space and 1,368 s.f. of meeting space. The second floor was calculated at 494 s.f. of office space and 2,508 s.f. of meeting space. Using these numbers, Title V loading for those uses, and 15 s.f./person (per Bid Code), I estimated a maximum flow of 937 gpd. That is very high and likely would not be approved by the BOH for the sheer fact that a system of that size could not fit on the parcel and the nitrogen loading is very large for a +/-15,000 s.f. parcel. The smallest flow would be calculated based on all the floor area being considered office space. That would yield a flow of 468 gpd.

A new septic system installed on-site would require a new septic tank, pumping chamber, and leaching field. It is difficult to estimate the cost without any soil or percolation testing. However, for planning purposes our experience shows that the system itself could cost approximately \$40,000 installed as a rated project. The other additional costs to consider would be engineering to permit the project and develop the construction documents suitable for public bidding. We estimate this could cost approximately \$13,000. However, both these costs are subject to change after soil testing is completed and a design flow is determined

Recommendation

Based on the ease of permitting and costs, I would explore Option 2 further. I would recommend official soil testing be performed on the site to determine groundwater and percolation results. This will give design parameters for sizing and grading for a leaching field. More research will be needed regarding location of existing utilities on the site to determine the best area for a leach field with the least amount of conflicts. Also, legal research will be needed regarding the easements or access rights over the property that abutting property owners may be entitled to. This could limit location of a leaching field and parking for the building.

With a potential low of 468 gpd and a high of 937 gpd for the site, the BOH should be consulted and asked to determine a daily flow for the existing building. This will give you a number to use for any future renovations. You will be held to Title V loading for whatever square footage you plan to renovate. For example, if 468 gpd is selected then the building can only have 6,240 s.f. of leasable office space or 156 seats for assembly or some combination of both.

Please contact me if you have any questions or comments.

Thanks,

Jesse Johnson, P.E.
David E. Ross Associates, Inc.
111 Fitchburg Road
P.O. Box 368
Ayer, MA 01432
(978) 772-6232
(978) 772-6258 FAX
jjohnson@davidross.com

From: Thomas Burgess [mailto:tburgess@mendersarchitects.com]
Sent: Monday, February 27, 2012 3:48 PM
To: jjohnson@davidross.com
Subject: RE: Sterling

Sounds good Jesse. At this point I think the septic options are the most important piece to the puzzle.

Thanks,
Tom

From: Jesse Johnson [mailto:jjohnson@davidross.com]
Sent: Monday, February 27, 2012 3:47 PM
To: Thomas Burgess
Subject: RE: Sterling

Hi Tom,

I heard back from one vendor for the septic. I just need to hear back from the BOH agent regarding a second option. I expect to by Wednesday and will be able to tell you what your septic options are.