

Town Buildings Committee Public Meeting

December 7, 2013

Attendees

- Dave Upton
- Susan Hansel
- Lisa Sieverts
- Russ Thomas
- Bert Wingerson
- Rob Germeroth
- absent
 - Bob Lenox
 - Maury Collins
 - Sandy Mackenzie
- Residents (possibly incomplete list)
 - Karen Tolman
 - Barry Tolman
 - Tom Tolman
 - John Smith
 - Laurie Smith
 - Tom Murray
 - Linda Cates
 - Mike Cornog
 - Al Stoops
 - Max Nunnemaker
 - Rick Church
 - Betsey Church
 - Kathy Schillemat
 - Dave Birchenough
 - Mike French

Meeting called to order at 11:10 AM

Going out to bid with the projects next week, this will be the last public meeting before that.

History

- Town Meeting 2013 funded architect's drawings with goal of fixed price contract for Town Meeting 2014

Town is now working on Bidding for projects

- 2 parts
 - Library Basement
 - Design/Bid/Build process
 - This is a simple process
 - Will select a local contractor
 - Town Hall and Library exterior
 - Construction Management approach
 - Have selected Ingram Construction
- During December, will manage both bid procedures
- Expect to have bids by January 9th
- Will present Costs at Caucus

Intro of panel

- architect Paul Hemmerich is not able to attend
- Jeff Trexler, structural engineer
- John Waite, Mechanical Engineer
- Ingram Construction
 - Jeff Ingram
 - Steve Ingram
 - Scott Lencioni

Overview of what has been done this year

- original scope
 - water mitigation at Town Hall
 - renew floor support structure
 - level floor
- Structural engineering report showed more problems

- racking and tilting
- deficient roof support
- Mechanical engineer inspected HVAC
 - Town Hall furnace
 - Town hall ventilation
 - Library cooling
- Construction Manager selected, who will
 - Recommend cost-effective construction methods
 - Acquire bids from sub contractors
 - Manage the construction

Jeff Trexler overview

- tilting and racking
 - At first visit, noticed the roof framing had a sag
 - this was not in original scope
 - and that wall was leaning
 - The lean, roof trusses sit on posts, as the wall tips, puts extra stress on the posts.
 - we have increased risk of failure, with NE wind and heavy snow
 - The whole rigid structure of the building is tipping mostly to the south, some to the west
 - this only accounts for some of the lean
 - Building is also racking, no longer square
 - this means that leveling is not enough
 - have to address east end to pull wall back up and add sheathing
 - and add stabilizing bracing in the roof to keep it straight and plumb
 - we're not seeing racking at the west wall
 - because of the "extra" wall at the storage closet, adds stiffness at the west end
 - This means we can't really shrink the storage closet
 - Not planning to add diagonal bracing, just handle it with the sheathing
 - Note that racking and tilting leads to MORE racking and tilting
 - life-safety issue
 - yes, there is a life-safety issue

- So we have added exterior diagonal bracing outside for this winter
- moisture
 - proposing concrete wall inside the rubble foundation
 - as barrier
 - In November, saw lots of moisture coming in
 - add drainage in the crawl space floor and moisture barrier and slab
 - and perimeter exterior drainage
- floor
 - currently have original hand hewn beams
 - old posts
 - added newer posts, with a poor method
 - these are rotting
 - remove the poor posts
 - the good timber beams currently sit on granite posts
 - remove granite posts
 - and have 3 posts per span instead of two
 - rough sawn posts
- roof trusses
 - offset from floor trusses, no idea why
 - each has a center hanger rod, except for the west end truss
 - at some point, they nailed 2x to each purlin
 - south side 2x6, north side 2x8
 - today building code snow 63 lbs per square foot
 - the south ones only handle 36 lbs
 - the trusses are only handling 20 lbs
 - this is where the bowing comes from
 - making assumptions about grade and species of lumber and steel rods
 - chestnut timbers
 - Recommendation
 - we don't have to meet current building codes
 - but if you leave as is, you should remove snow load
 - and we don't want the Sexton to have to do this
 - so plan to reinforce, but how much?

- 50 lbs?
 - 63 lbs?
 - If we go to 63 lbs, we would have to add reinforcement in the interior of the building, which would greatly change the interior
- Questions
 - will concrete foundation against rubble be structural?
 - yes
 - stabilizes the rubble
 - DaveU
 - Ingram is telling us to replace the rubble foundation
 - We plan to do a lot of work on the east end
 - replace the foundation there, no matter what, under east wall and north wall to connector
 - replace existing 4' stud wall so that we can bring new concrete well above current top, it's too close to the ground
 - remove clapboards, add skin of plywood, and put back clapboards
 - What about the connector?
 - during construction, disconnect the connector
 - have to do this in order to bring the walls back to vertical
 - So may have to cut back 4 inches
 - Drainage
 - most water coming from east wall
 - we're creating a boat with the foundation height concrete
 - Water is washing outside water through the foundation, there is what looks like a delta in the crawl space
 - and water table is only about 18 inches below
 - have to have drainage system under the slab to take that water to daylight
 - if we leave the rubble foundation, can't dig close to it, because the soil is part of the foundation
 - Committee's original direction was to keep the rubble foundation for preservation reasons
 - Maintain the cut granite capstones, nice finished stonework

- we will be picking the building up off the capstones
 - we propose raising the capstones and shimming between the bottom and the top of the foundation (whether it's rubble or a new foundation)
 - so no matter what, you'll continue to see the granite capstones on the outside
- Dance floor
 - maintaining spring?
 - Planning on not changing the performance of the floor, but hard to predict exactly what will happen when we add the new supports
 - JeffT doesn't think the "response" will change
- Insulation and ventilation
 - defer to John Waite
- Making the room bigger (Rick Church)
 - We do sometimes go over the Fire limit
 - Nelson is bigger than it used to be
 - Worried about Town Meeting
 - JeffT
 - The choice to remove the storage wall would increase space
 - but you would have to then strengthen the west wall
 - Roof truss at that end sits on the storage wall
 - We can deal with this, we will reinforce that truss
 - but how to prevent future racking?
 - Remove the stage?
 - Lisa says Folklore needs it
 - Susan says all presenters need it

John waite overview

- HVAC
 - currently heated by propane furnace in the storage closet
 - The return is wood, very carefully made!
- furnace
 - Plan is move the furnace down below and add new ductwork under floor and registers along the walls and in the floor (wooden registers) to supply heat

- No airconditioning but did ask for ventilation
 - with the duct work, could tie in fans to bring in 1600 cubic feet of air per minute
 - 10 diffusers, compared to the current 3
 - bring in air from north side, as close to the ground as possible
- this method would prepare us for air conditioning in the future
- Return air
 - use the storage closet, hole in floor where furnace sits now
- Your current boiler is good, 92% efficient
 - has a bit of rust
 - you should have a technician look at that
 - so currently, we are planning to use this furnace
 - it moves about 1600 cfm
- Questions
 - why not bring air from crawl space?
 - too musty
 - we already have a problem with noise, will fans be noisy
 - The fans will much quieter than the current furnace
 - exhaust into the ceiling?
 - we will exhaust high, at the old wood stove exit
 - How to add airconditioning
 - you'll have all the ductwork
 - you'd add an airconditioner outside and a coil inside
 - probably another \$4,000 (guess)
 - there is a limitation from the 1600 cfm
 - code says if your building is above 4.5 tons, you have to add an economizer to blow 55 degree air in
 - once you start cooling, is the lack of insulation a problem, will we get condensation inside the wall cavity?
 - feeling is that the air conditioning will be humidify
 - and blow more air in than I'm pushing out
 - the fan solution will work with the windows open
 - yes
 - and you could have controls to give you many options

- just have to be careful not to bring in ventilation AND heating
 - controls will handle this
 - ventilation will be on a timer so it cannot be left on
- Library Basement
 - 3 rooms
 - storage
 - archive
 - meeting
 - dehumidifying
 - get “whole house dehumidifier” in the current mechanicals room
 - goes on whenever humidity is over 60%
 - current library furnace has no controls for the basement
 - so one option is to add a zone for the basement
 - \$3000
 - another option is add a pellet stove
 - John recommends a heat pump for the Library basement
 - new heat pumps work down to 13 degrees below zero
 - \$4000
 - and you get air conditioning “for free”
 - But you told me that the Library uses window air conditioners
 - with a bigger heat pump, you could air condition BOTH top and basement library
 - doubles the heat pump cost
 - but would halve the heating cost for the library
 - and it will dehumidify the meeting space, too
 - and you could use the heat pump and add in the Town Hall
 - variable refrigerant system could take dancer heat and send it in to heat the library
 - This is what John Waite recommends
 - and lots of rebates available
- questions
 - who has a heat pump?
 - PSNH uses it in their own buildings
 - Nashua apt building

- Eppingham Library is also looking at it
- Town Hall
 - you have perfect south facing roofs for solar
 - you could generate the electricity you need to heat these buildings
 - and generate electricity to sell back to PSNH
 - You could get one big heat pump, or one for the library and one for the town hall
- Question
 - do we need insulation in the walls?
 - TBC thinks cost/benefit isn't there
 - what about rapid heating for dances
 - heat pump doesn't deliver quite as fast
 - furnace delivers 110 degrees
 - heat pump delivers 92 degrees
 - You'd schedule it to get the heating going a bit faster, would only need an extra hour

Ingram

- we are the newest member of the team, on for 10 days so far
- We are currently uncompensated
 - will be paid after Town Meeting
- We have worked with you before
 - Church foundation
 - this is a simpler project
 - we have done many projects like this
- CM process
 - pre construction
 - where we are now
 - we are quickly coming up to speed
 - today's meeting is useful to learn more
 - our role now is learn, and provide feedback when asked on cost and constructability
 - once we get a bid set of documents
 - we'll put it out for bidding
 - goal is to get the best person

- schedules
- work to code
- OSHA compliant
- maintain detailed cost information
 - shared weekly with the TBC
 - completely open book at all times re cost and schedule
 - if we can see that we are on track for costs, we can make intelligent decision to increase scope (like buy bigger heat pump)
- Scott Lencioni will be our project manager
 - support to the field, esp. the superintendent
 - also liaison to engineers and architect
 - weekly or biweekly job meetings
 - following costs
 - writing change proposals
 - this even happens with GMP
 - it there is a significant change
 - at the Ingram office but available at all times
 - makes the schedules
- post construction
- Questions
 - how long Town Hall out of commission
 - mid April to beginning of August

Funding

- have \$200K+ in Capital Reserve
- recommending against bonding
- we have some grant opportunities
 - applied to LCHIP, hope to hear soon
 - but we are up against 74 applicants this year
 - asked for \$100K in matching grant
 - Putnam Foundation application
 - have received \$10,000 mooseplate grant to fix the windows, so this will happen even if nothing other work gets done
- Fundraising Committee

- Think we have enough to at least address the urgent issues

Dave Birchenough

- story about local provisioning of materials
- their CM, 10 years ago, said I have to get it from Manchester
- but we saw that Hamshaws was able to come in with the best price
 - recommends that someone from the TBC goes to Hamshaws directly
- And Hamshaws responsiveness was amazing, same day delivery
- Steve Ingram
 - we estimate quantities of everything we think we will need
 - we'll send that materials list, and we'll send it to Hamshaws, Perkins, LaVallee – all local
 - we won't go to Home Depot

Priscilla reminds us that the Town Hall was built by farmers, on beer

Dave Upton

- Acknowledge that we still have alternatives to discuss,, some of this may have to happen all the way up to April
- Issues
 - Leaving rubble foundation or replacing it
 - Ingram speaks to the problems of the 1-sided concrete wall
 - there isn't a "side" to the concrete form to manage the tremendous pressures from the wet concrete
 - the backside is the rubble foundation
 - have to pour footing first, not matter what
 - then erect 1-sided wall
 - 8 inches away
 - and the rubble foundation is wavy
 - so start where the rubble foundation is furthest out
 - so sometimes it is 8" thick, sometimes 18" thick
 - the forces of the concrete want to blow out or liff out
 - very labor intensive to build the form
 - requires a lot of concrete, much more than for a straight new wall

- benefit
 - more water proofing on the outside
 - the 1-sided wall allows water to travel through the rubble and then you stop it
 - and you could still use the granite capstones
 - costs?
 - twice as much, at least, for 1-sided wall
 - Rick Church speaks in favor of replacing the rubble foundation with the new concrete foundation
 - Barry Tolman says no one looks at the rubble foundation, so votes in favor of new concrete foundation
- TBC wants to use rough sawn lumber where possible
 - currently calling for rough-sawn posts
 - but for the joists and reinforcing of joists, using dimensional lumber
 - can't get nail gun nails long enough to use rough-sawn for the joists
 - adds a lot of cost to use rough-sawn there
 - currently, there is a sag between the beams
 - so problem of only contacting the floor at the centers
 - so there is a constructability issue
 - existing timber beams are deteriorating at the lower side
 - have to avoid nailing into the lower, more deteriorated side
 - rough sawn is not graded
 - for JeffT, has to be conservative with allowable stresses
 - also not kiln dried
 - so it will move as it dries
 - and wet it has less strength
 - JeffT
 - hangers are set up for 8" wide
 - rough sawn won't fit the hanger
 - now material is cheap and labor is expensive
 - in the old days, it was the other way around
- heat pump

- Most of JohnW work is the same whether you use heat pump or gas furnace
 - GMP is for defined scope of work
 - you can have alternatives that add or deduct to GMP
 - lots of alternatives can make the bid process cumbersome
 - we have to group the alternatives logically
 - some alternates are standard
- solar
 - DaveB
 - there is a fundraising campaign in addition to town support
 - think their will be donations for alternative energy
 - how to go forward with it
 - DaveU says hard to fit in now
 - we ask JeffT about roof support for PV
 - if you do it parallel to the roof, it's good
 - snow slides right off, with unobstructed eave
 - but if you want to elevate on brackets, that is bad, snow will collect
 - TomT is worried about reroofing
 - because 40 year shingles last about 12 years
- insulation
 - ingram
 - temple town hall
 - walls were original plaster
 - debate about whether to insulate
 - changes teh building science
 - changing the dew point within the wall
 - decided not to insulate the plaster wall, Rick Monahon
 - we did spray foam the foundation walls
 - DaveB asks if we have an energy auditor on the team
 - no
 - He says there are local experts
- spray foam insulation under the floor deck
 - DaveB wonders why do this and not do the walls

- and it's expensive
 - it does help protect against moisture
 - but if moisture comes down from the top, wood could deteriorate and we would never know
 - DaveU is concerned that we cover up all the historic joinery
 - we are leaning away from spray foam
 - ingram
 - insulate the concrete slab
 - insulate the new foundation walls
 - better ventilation
 - ductwork will make it more "temperate" down there
 - Bert says Linda Willett says don't add insulation to buildings of this age
- concrete slab
 - JeffT
 - you have to protect your moisture barrier
 - currently, the plasttice has gaps
 - concrete will protect the vapor barrier
 - and you don't want to pierce it at all
 - JohnW
 - radon
 - the more you seal up an underground space, the more ti will concentrate in other areas
 - should probably be tested?
 - but nobody lives at the Town Hall
 - The crawl space will be leveled

questions

- Thank you for doing this

Motion to adjourn from Susan, second by Russ, all in favor at 1:25 PM