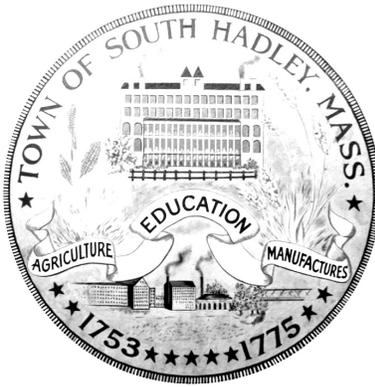


For review

## **Town of South Hadley**

# **Municipal Buildings Needs Study**

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prepared by

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## Municipal Buildings Needs Study for Town of South Hadley

### Introduction

This report is based on overall assessment of existing conditions from an overall point of view based on a review of facilities of major issues found only without assessing in detail any specific conditions found. Based on observations issues observed for were: life safety, handicapped accessibility, conditions of exterior and interior materials, hazardous materials, and potential remedial work to correct any such major deficiencies in a somewhat prioritized manner as: critical, necessary or needed, and recommended. Improvement and or replacement or reconstructions costs will be limited to Lump sums of specific needed requests of different building caretakers and of observed issues. As requested, the study will prioritize the severity of issues found into the 3 listed below categories of importance of issues found at the facilities, and will be further detailed under the specific buildings and in order of importance, based mostly on life safety first, and material building deterioration as secondary.

Buildings included in this study are as follows:

- Town Hall
- COA - (Senior Center)
- DPW - Administration
  - WWTP
- Ledges Clubhouse
- Ledges Maintenance Building
- Police Station
- Old Firehouse Museum

Population history of Town of South Hadley varies by slightly by different sources used and where:

- 2000 census listing           17,196
- 2010 census estimate       17,636
- 2020 projected estimate   18,108
- 2017 estimated for study   18,000

Priority levels assigned to issues for this assessment:

- 1. Critical** - is a condition for the purpose of this report to be considered a current or potential a safety hazard, major building deterioration issue needing immediate attention and corrective work.
  
- 2. Necessary** - does not pose immediate danger, but detracts from building needed functions, if neglected may become critical with major cost implications, or a burden in operating and use of the facility, and a potential safety hazard. A major building code violation not affecting safety.
  
- 3. Recommended** - category is one representing a needed improvement to existing conditions in basic function, prevent deterioration and perhaps improve maintenance or operating costs while making the facility function in a manner intended.

Customarily such a study also involves several areas of expertise such as electrical, mechanical, structural, hazardous materials, and roofing experts, but due to the type of general nature of information such experts will only be contacted to help in some complex and specific issues found. A suggestion is being made to further investigate all building areas and components in detail prior to making a final determination of action for some instances where issues were not readily seen or brought attention to.

During the sequence of renovations of spaces there will be a need for temporary spaces where continued operations of towns departments can continue during while their space is being renovated or relocated within the building, and requiring well planned phasing and scheduling of the work during construction.

Previous facilities studies and reviews were also of importance in showing some historical records of work performed and describing of building condition and needs. The following existing facilities reports were available for review:

- Tristate “Roof Inspection Report” dated 12.29.2014.
- ISES “Facility Maintenance Review” dated 4.2.2013, covering most municipal buildings ;
- “Report on Town Hall Condition, Maintenance, and Needs, by Town Administrator dated 9.2.2002 (*comprehensive physical & mechanical building systems conditions report and needs*);

In addition, those responsible for the facilities, were asked to list most important items needing attention, corrective action, or items of needed for proper function of facility, but without a detailed list of issues. summarize major areas of concern, substantial deficiency, or a major need in their running of the required functions or operations. They will be addressed in each individual building assessment study.

### **Life Expectancy Projection**

Specific life expectancy of proposed renovations and improvements, along with existing buildings will not be offered as such life expectancy evaluations are based on past and present lack of even attempts of any customary maintenance of corrective or other such improvements to defective components of a building. Not only no corrective maintenance is being performed despite several previous studies and recommendations for such programs, no program has even been established to date. The requested expectancy of any proposed reconstruction components is a qualitative variable based on quality of materials and methods chosen. “Buildings have a life span of 50-100 years”, according to report: 5.15.2007, *Statement of The U.s. Green Building Council*, however we have many useful buildings well in excess of that, when properly maintained, not counting historic buildings. According to some stae funded projects requirements, a required minimum life expectancy of proposed projects of minimum of 25 years is required to receive funding. Most of proposed work is offered on such basis where major building components are expected to last much longer, excepting the obvious finishes of customary wear. Due to the repeated requests of maintenance of building by all users of my visits, several studies placing major emphasis on need of maintenance to retain buildings longevity and value, that no effective program has yet been established by town of South Hadley, along with most other communities in the region. It would be futile to assess longevity as no such information have been found that is readily available for facilities without any maintenance programs.

### **Estimating Renovation Costs:**

The most challenging aspect of the study will be to be able to find and deficiencies and issues and provide some cost estimate without availability of updated floor plans to formulate quantities or amounts of materials, since areas or quantities of concern are not available or a method to achieve them is unknown and has not revealed itself in my over 40 years of professional practice. Providing simple guesses on amount of remedial or reconstruction work by viewing buildings has not been developed to

make any legitimate determinations for cost estimates for each building of different size, area or volume of materials, as well as amount of labor, to achieve any real estimates. After initially visiting the two facilities, and seeing such numerous issues the study tasks showed the project seemed overwhelming with such numerous unknown quantities or areas to even produce even “ball park” quantities of remedial or replacement work to assign cost factors, a decision was made to create full cad drawing plans of the two largest and most complicated buildings, the Town Hall and the Council On Aging facilities. All cost estimates are always based on some form or manner of quantities to assign dollar values to and since it was not in scope of services the task was performed at no cost to the town. The other facilities being of simpler layouts few building measurements were taken to create at least an outline of the building to determine its area and get a better comprehension and basic quantities needed for the study evaluations. Plans and outline sketches of are also included in the report where needed.

Total renovated or new building project costs are a combination of “hard” construction costs that represent approximately 70% of total project, and the “soft” incidental costs that account for up to 30% of total project costs. Soft costs include the following: project management, architects & engineering fees, environmental and hazardous materials studies, project contingency, keys, locks and signage, equipment and furniture (if any), temporary relocation, storage, moving costs, project feasibility studies. Customary building construction estimates and costing analysis is quantity based upon square foot size, and specific costs are also based on a quantitative basis of areas or volumes upon which a Lump sum of new or renovated costs are assigned. In this study the whole building areas are used to estimate construction costs with an approximation of percentages breakdowns of each building category is established based on averages of other similar projects already completed, or previously estimated by other professionals for specific municipal building studies will then be utilized for this report.

Additional information needs to be added such as reduced annual operating costs of upkeep and energy usage of new facilities when compared to renovated facilities is not in the scop of this study. Such information will be needed for impact on long term final costs of facilities over 20 or so years, the customary life expectancy of projects. Another factor not fully addressed is the efficiency of space uses of each for each facility needs to be confirmed by the town with space use study with each department to compare to the quick assessment offered by viewing other similar such studies already performed. This information becomes important in determining size of any future building replacements needs. The new facilities can then be designed in the most efficient use of space and a smaller needed overall facility.

Even for purpose of proper comparison of costs, spaces not needed or used at the present can be renovated minimally or at future dates when the space is finally occupied or perhaps offered to another department not presently housed in same facility but has need for records storage or other functions. A consideration will be given for the adjacent Police Department building long term records storage needs could be placed in the Town Hall basement areas not presently occupied or needed. In addition the new or renovated facilities a study is needed to assess present day needs of all departments and any proposed consolidation of functions based on today’s technology requiring reduced storage needs or staffing being replaced by technology. Perhaps the existing present Town Hall total storage spaces of 7,400 sf can be substantially reduced and lower substantially the cost of new or renovated projects.

The shift from customary way of doing things to electronically based manner is rapidly changing all of spatial needs by expanding our use of online activities that unfortunately are causing the demise of many department stores being replaced with electronic online merchandising purchases, billing, and storage of records. What has been noted in survey of all facilities is the very slow transition period of present paper record keeping to electronic format and to a paperless process of all activities records.

## **Building Codes Impacts:**

All proposed work will need to comply fully to building codes in particular those where exceeding certain cost or area limitations of existing buildings, additional and new requirements are triggered that change the overall scope of the project scope and costs. Any alteration, repair work on existing buildings is governed by 2009 IEBC (International Existing Building Code) and MA amendments to it and known as *Existing Building Code of MA*, and in addition with energy efficiency in accordance with IECC 2009 and MA amendments. Energy codes do not require bringing whole facility to be modified except for new work or exposed exterior walls and roof cavities need to be filled with insulation. Existing structural system is unaffected if the work does not impact it more than 2% of the horizontal framing members of any existing framed floor or roof. Fire Sprinkler system will be required for buildings with occupant load over 30 and where work area exceeds 50% of floor, but only if building has sufficient municipal water supply without a new fire pump. Architectural Access Board has a limitation where if the cost of all projects within a 3 year period exceeds 1/3 of assessed building value, the whole existing facility and its components must be in full compliance and where local building departments have no jurisdiction on interpretations or any variances.

The most challenging will be the 521 CMR : ARCHITECTURAL ACCESS BOARD on the use of public buildings by the physically handicapped which may have the most important financial impact of renovations costs, where if they exceed more than 1/3 in a 3 year period, where the total authority rests with the Board, *“An owner or an owner's representative or tenant who thinks that full compliance with 521 CMR is impracticable may apply to the Board for a variance from 521 CMR.”*. The following building facilities will be impacted by 521 CMR regulations:

Town Hall - assessed value	\$669,500,	renovations limits of	\$223,167
COA building - assessed value	\$681,500,	renovations limits of	\$227,167
DPW Admin. - assessed value	\$413, 800,	renovations limits of	\$137,932

The Town Hall and CVOA buildings are also affected by the state amendment on existing hazardous conditions which shall apply to all existing municipal buildings where the following conditions shall be corrected:

*-Any means of egress which is not so arranged as to provide safe and adequate means of egress, including exit signage and emergency lighting in accordance with Chapter 10 of the IBC 2009 with MA amendments. Specific facility compliance issues and requirements will be addressed in more detail under each facility, where required compliance will vary and some allowances are made for exemptions and alternative compliance.*

Some work when undertaken will result in reduced or eliminated requirements such as an automatic sprinkler system will eliminate the needs for designated “Areas of rescue assistance”, in a fire and smoke protected area for handicapped wheel chair users. A sprinkler system reduces or eliminates some required fire rating of walls and floors, increased maximum distance of travel to an exit, e.t.c.

The estimate costs are for the year 2017 and a 4% per year inflation rate needs to be added for the year the anticipated work may be planned for. Since this study is of generic nature based on observation only, actual conditions may vary when they are fully investigated and final determination of the extent of work is required, which will lead to different actual costs. Continued deterioration may also affect the final amount of work needed to correct or reconstruct building components. To demolish a building the costs without any hazardous materials investigation or removal would be in range of \$0.70 to \$1.00 per cu ft, and for town hall for instance it would be in range of \$350,000 - \$500,00, while the COA building would be in range of \$200,000 to \$300,000, and where it needs to be.

## Town Hall

### History and general building codes impacts:

Built in 1913 as very unique multi-use facility, originally a High School & Town Hall, and later changed to an Intermediate School & Town Hall from 1956 and 1959, and now a Town Hall shared space with School Administrative offices. It is a 3 story building of brick masonry exterior walls and interior wood partitions with plaster finish, while floors are of wood construction with vinyl tile for finish surfaces. Interior walls are mostly masonry walls at corridors and room dividing walls as well as auditorium walls, but difficult to confirm as all interior partitions are surfaced with plaster or gypsum board finish. Most areas have a suspended ceiling system installed under existing perforated acoustical tiles blued to plaster ceilings. Numerous other upgrades and alterations have been performed throughout the building and being mostly of decorative nature with storage vault rooms created, accessible toilets provided for and an elevator was installed around 1989, and in process of upgrading. New fire alarm system was in process of being installed throughout the building.

The Occupancy classification is Business group B reserved for offices, professional type service type transactions, including storage of records and accounts and including, but not limited to Civic Administration uses. The building is of Type III B type of construction consisting of non-combustible exterior walls of masonry brick, however since the fire separation distance of 30 ft and greater surrounds the building no fire rating is required of the exterior walls and can be of any material, including wood, is allowed by building codes. The building is allowed a height of 3 stories and 19,000 sf of area per floor, which can be increased by 150% in floor area to 28,500 sf, due to the perimeter of having at minimum a 20 ft wide public way or open space. The existing facility is within the allowable height and area limits, being of a 3 story height and of 17,867 sf first floor area, the largest of floors.

Being almost 100 years old the building is of overall solid construction where the major building components appear in good shape where there is no noted sagging of floors or leaning walls offering a solid base for renovation work. Structural investigation is recommended to confirm the visual observations made. The Ground Floor level is actually located in a basement which is approximately 4 to 6 feet below the ground which slopes to the rear of building and where the lowest area of the old boiler room is 3.5 ft below the main basement level. In viewing the brick basement walls, being up to 9 ft below ground surface, only minimal wall moisture penetration was found, suggesting sound basement wall conditions with apparently good drainage away from the perimeter of the building. Much of the basement space is being utilized for paper records storage and parks and recreation department equipment with some office spaces off the main corridor along the south portion of the building.

Heating system has been updated with new boilers and updated the distribution system from steam to hot water in rooms and spaces but no mechanical ventilation system was provided for, except for the window air conditioning units sprinkled throughout the building. Electrical systems have been modified throughout the life of the building on an as needed basis and the present system is a collection of different vintage installation including some of the original "wire & knob" wiring in some hidden areas. When new installations were made, most of existing abandoned lines were left in place and not removed making it a challenging task of identifying individual lines.

The exterior of building the brick is in good condition except for the six ornate arched roofs over entries that ongoing water seepage issues from the copper roof protection metal roofs and flashing. The decades of water penetrations around and through the metal have eventually led to falling brick onto the entry stairs and landings resulting in closures of two main entries to normal use and only as emergency egress routes. The water penetrations have worn out mortar in joints where the freeze-thaw cycles have

damaged the integrity of the entries brickwork and will result in possible collapses in future. In few areas structural cracking of exterior brick has been noted and lack of downs-pouts to direct the rainwater safely to the ground is allowing streams of water down the brick face of the building deteriorating the brick. In viewing the interior the water has not yet visibly penetrated to exposed surfaces.

Exterior windows were replaced with new vinyl double-hung or fixed with insulating glass and in fair condition with several glass panes of glass cracked and in need of replacement. The windows were installed in 1995 but the wood interior perimeter trim and sills were not replaced and being over are in very poor condition, with many trim pieces dry-rotted and falling off. Customarily window replacement include interior trim replacement as well, with metal or vinyl panning system assuring proper weather closure on the interior, which was never done.

Individual air conditioning units placed in windows also pose a hazardous condition as their securement in the openings needs to be examined at least on a temporary basis to assure that none are in danger of falling out until a more permanent solution is achieved with a central air conditioning system. Sufficient headroom appears adequate for a new suspended ceiling system to conceal plumbing & sprinkler piping and new duct-work for new hvac system. Original existing ceilings in building have perforated acoustical tile applied to existing plaster ceilings. Window areas will have sloped or soffits at windows which will be above new ceilings.

Existing roofs are of a single ply membrane where they have been already replaced and where the main roof has reached its limits of protection with apparent leaks noted on second floor hallway ceiling, and of statements that the perhaps the membrane itself has shrunk and is pulling away at perimeter flashing.

Parking areas available to all are totally inadequate where the existing cramped and undersized (98" wide where minimum recommended is 108") 32 spaces along with 18 on street spaces available provides a total of 50 spaces where zoning regulations require 3 spaces per 1,000sf of building area require a total of 135 off street parking spaces. Attempt was made to increase total parking if existing town hall is renovated by purchasing at minimum the adjacent club facility which does not appear to be fully utilized where if it were purchased and demolished, a minimum of 26 additional spaces could be created. In addition there is also an abandoned former gas station convenience store that may also be available.

Accessibility: The previously installed elevator is presently under safety and other upgrades to required safety standards, allows the required handicapped access to all building levels, as required by handicapped regulations. Existing buildings are exempt from full accessibility compliance when all work performed on public buildings is less then \$100,000 and amounts to less than *"30% of the full and fair cash value of the building"*. However, according to the governing state regulations Section "3.3.2 the present assessment of the Town Hall is listed at \$669,500 any combination of projects in a 3 year period cannot exceed \$223,167. Some additional exemptions allow the following type of work, up to \$500,000 where building permits are taken out for: curb cuts, alteration work limited solely to electrical, mechanical or plumbing systems; hazardous materials abatement; retrofit of automatic sprinkler systems; roof and windows repair or replacement; repointing or masonry repair; site utilities and landscaping. In past experience of clients seeking variances from full compliance, it has been a constant theme that financial hardships or limitations have not been granted to date.

**Critical priorities:**

C1. Renovate & reconstruct 6 roofed building entries:(replace metal roofs, re-flash with gutters & downspouts, repoint & repair brick supports & adjacent walls, clean brick, repair & re-caulk granite stairs	Lump sum	\$ 150,000
C2. Main 2 story roof replacement, replace 7,800 sf roof and 200sf of existing insulation and plywood deck, parapet flashing 360lf.	Lump sum	\$ 130,000

*Total Cost of first 2 Critical priorities of \$270,000 alone exceed 1/3 assessed value of \$ 223,167 triggering full handicapped accessibility compliance for the whole building.*

C3 Egress safety:		
3.1 Install emergency lights & exit signs in basement	Lump sum	\$ 20,000
3.2 Reconstruct 2 basement egress stairs	Lump sum	\$ 60,000
3.3 Reconstruct 2 1 <sup>st</sup> floor exterior wood stairs	Lump sum	\$ 60,000
3.4 Reconstruct 3 stage egress stairs	Lump sum	\$ 30,000
C4 Handicapped accessibility compliance:		
4.1 Replace hardware only, if door is recessed < 6"	Lump sum	\$ 120,000
4.2 New doors & frames, if door is recessed > 6"	Lump sum	\$ 160,000
C6 Reconstruct, extend 2 floor ramps with landing	Lump sum	\$ 40,000
C7 Provide wheel chair areas of refuge at ea floor	Lump sum	\$ 90,000

**Total Cost of Critical priorities**                      **\$ 860,000**

**Necessary priorities:**

N1 Automatic sprinkler system	Lump sum	\$ 180,000
N2 Front interior 2 stairways refurbishing	Lump sum	\$ 70,000
N3 Auditorium windows perimeter wood trim	Lump sum	\$ 30,000
N4 Remove & replace all interior windows perimeter trim in all offices all floors	Lump sum	\$ 100,000
N5 Repair, remove and replace dry rot at 2 front entries	Lump sum	\$ 5,000
N6 Replace broken windows	Lump sum	\$ 15,000
N7 Maintenance technician and a maintenance program		<i>Unknown</i>

**Total Cost of Necessary priorities**                      **\$ 450,000**

**Recommended priorities**

R1 Repair or re-surface walkways around the building.	Lump sum	\$ 20,000
R2 Replace 2 front entry door and transom systems	Lump sum	
R3 Install new flooring of used spaces 32,000 sf	Lump sum	\$ 70,000
R4 Remove asbestos tile on all levels	Lump sum	\$ 180,000
R5 Increase parking by 26 cars, not including purchase of adjacent parcel, including demolition of structure	Lump sum	\$ 145,000
R6 All windows replacements w/interior trim	Lump sum	\$ 650,000
R7 Repair, sand and refinish stage floor	Lump sum	\$ 5,000
R8 Upgrade Audio/Video Town Hall Auditorium	Lump sum	\$ 40,000

**Total Cost of Recommended priorities**                      **\$ 1,178,000**

**Total building renovation option,**

including new HVAC system and new reinforced pvc roofs of 30 year warranty. Total and complete renovations to bring the facility to present day building codes of all office areas on 3 floors, including new HVAC system, and only minimal renovations of basement storage areas and basic clean up and paint only in boiler room and vacant space under the meeting room stage area. No work will be performed to existing storage vaults, total area of 1,100sf and located on first floor.

Office and other usable spaces	31,550 sf @ \$200/sf	Lump sum	6,310,000
Storage basement spaces	10,212 sf @ \$ 80/sf	Lump sum	612,720
Boiler rm, vacant !st fl vaults	3,458 sf @ \$ 40/sf	Lump sum	140,400

**Total Town Hall renovation construction estimated cost = \$7,063,120**

**New Building Options:**

For a new building construction option 3 separate scenarios will be used but do not include purchase and improvement of property.:

- A. Total new building size based on other town hall studies and their interpolation to square ft of building based on population. Using population of 18,000 and 1.37 square ft per person.  
18,000 x1.37sf/pers.      24,660sf @ \$300/sf =      \$ 7,398,000
  
- B. New building size based on actual office and support spaces used presently with storage spaces  
32,000sf @ \$300/sf =      \$ 9,600,000
  
- C. New building of exact same size as existing:  
45,220sf @ \$300/sf =      \$13,566,000

If the decision is made for a new facility or to lease space at another location there will be a need to determine how to sell or lease the existing town hall building. In other such undertakings it was found very difficult to sell the building at a price favorable to the taxpayers, in particular in locations where there is abundant vacant space available nearby.

## Council on Aging

The Senior Center is located in former Woodland Elementary School building constructed in 1924, renovated in 1956 when an addition of classroom wing was constructed for a total of 17,180 sf of 1 story building area. A major renovation/upgrade of a new HVAC and electrical systems around 1998, kitchen was updated in 2012 and flat asphalt built-up roofs replaced with a new rubber membrane roof and with new roof insulation. The replacement of roof also required additional structural roof support system of columns and concrete support system in basement in area of existing dirt floor. The 2012 renovations included heating and electrical system upgrades including a sophisticated controls systems and enormous central electrical control system module. Additional renovations have taken place where some windows were replaced with translucent insulated panels similar to or the "Kalwall" system.

The building is classified as A-3 Assembly occupancy uses intended for worship, recreation or amusement which include community halls. The building is also of a type III B construction type where it is allowed to have maximum area of 9,500 sf which can be increased by 150% to an area of 14,250 sf but the facility of 17,180 exceeds the allowable area and may be in need of a sprinkler system to be in code compliance of today. Since it was constructed under different regulations of the time period for a different use, the change of occupancy from educational to assembly also occurred under different regulations a thorough building codes review needs to be undertaken prior to start of any major renovation. It could be allowed of unlimited area if an automatic sprinkler system is installed (approximate cost of \$70,000), then it can have an unlimited area as per section 507.7, of 2009 IBC when surrounded by public way or yard of 60 ft or more as it seems to be now.

The COA facility is of similar age as the town hall of being almost 100 years old and also of being of overall solid construction where the major building components appear in good shape and where the roof structural system already has been upgraded, but an additional complete structural evaluation by a structural engineer is still highly recommended to confirm the visual surface observations. The outward appearance of the building and surrounding grounds shows an almost total lack of proper maintenance and upkeep where if it were not for its hidden out of sight location, the town would be continuously accused of total neglect of its senior citizens. In a nutshell, the building is in a deplorable cosmetic condition that needs substantial improvement or planning of new facility construction must be undertaken.

Exterior walkways and parking areas have numerous tripping hazards even for young enthusiasts. Peeling paint and dry-rot is evident on most of exterior wood trim, as well as metal door and frames rusting. Many exterior egress doors swing over a sill drop of 7"-8", where none is allowed due to severe hazard of tripping and falling due to unexpected floor elevation drop. The exterior concrete pads at those doors are in substantial cracking, separation and disrepair adding to the obstacle of proper egress in normal conditions but really dangerous in emergency haste. The facility was built as an elementary school requiring exits from all classrooms which may no longer be needed and an interior evaluation needs to be performed on needed only exit doors and eliminate others, as already noticed that some doors already have been eliminated. There are other numerous tripping hazards as well, paving potholes, raised concrete curbs of abandoned areaways and other such raised concrete structures. Some regrading is also required to channel away roof and surface rainwater from entering the building, in particular the basement ramp entry doors where nearby roof drain as well as the driveway area slopes to resulting in repeated flooding of the old basement floor area.

Where it may have an upgraded with some unseen mechanical and electrical systems, but never seeming as a complete package replacement but several vintages of different heating systems and their components are somehow integrated together into a final product that is difficult to properly control heating or cooling of spaces.

Interior of building is very poor condition and the visual of finishes like ceilings, floors, walls, trim and furnishings, all show complete lack of proper maintenance or replacement when damaged. Vinyl tile flooring is cracked throughout the facility and missing pieces replaced with mismatching color and style. Apparently in areas receiving new duct-work and other mechanical work had new suspended ceiling and new lighting was installed in those areas. Other ceilings have the original perforated glued on tile ceilings. In several areas it appears that some of the new ceiling tiles are stained from roof leaks that were fixed in 2012 with new roof replacement. In other areas even the original glued tiles have fallen and not replaced. In some areas of attempted ceiling tile replacement was performed with several different types not matching. There is sagging of the 2x4 suspended acoustical tiles in some areas, suggesting an incorrect or thinner type of acoustical tiles were installed. The flooring has also been neglected where there is lifting and cracked tile everywhere and most replacement pieces are rarely matched in color or type. Wood floors of cafeteria have outlived their life expectancy long ago and in need of new replacement, substantial refinishing or recovering. The original raised platform of the school activities have no rails, barriers or guards and is a hazard when used for recreational activities, and needs a resolution. Kitchen area was updated with equipment but not the required cleanable wall surfaces as required by health codes and the areas of windows behind dishwashing sinks cannot be maintained and cleaned properly as those walls should have washable and cleanable capabilities.

The condition of the building only lends itself to a complete building renovation of all finishes, as trying to repair, replace or refurbish any individual components will only add to the problem of continued patchwork of incomplete work phases not properly organized and carried out. Doors & Windows are of varied vintages from original single glazed windows, combination of upper fixed translucent panel & lower aluminum operable awning type, and all will need further investigation and likely replacement.

**Total building renovation option,**

Since the newer HVAC and electrical systems will not need a complete replacement some credit, as will the kitchen equipment, will be given towards the renovation costs. The 2012 replacement roof or the sloped roof shingles would also remain further reducing the overall building renovation costs from \$200 to \$170/ sf., and only minimal renovations of basement areas of basic clean up, moisture proofing, if required and removal of abandoned boiler.

Complete building renovation	17,180 sf @ \$ 220/sf	Lump sum	\$3,800,000
Total renovated floor area	17,180 sf @ \$ 170/sf	Lump sum	\$2,920,000

**COA building renovation construction cost range = \$2,920,000 - \$3,800,000**

**New Building Options:**

For a new building construction option 3 separate scenarios will be used but do not include purchase and improvement of property.:

A. Total new building size based on other COA studies and their interpolation to square ft of building based on population. Using population of 18,000 and 0.72 square ft per person.  
 18,000 x 0.72sf/pers.      12,960sf @ \$320/sf =      \$ 4,200,000

C. New building of exact same size as existing:  
 17,180sf @ \$320/sf =      \$5,500,000

**COA building renovation construction cost range = \$4,200,000 - \$5,500,000**

## DPW Administration

The DPW administration facility is a combination of small office building of 1,984 sf and a metal garage type building used for repair and storage of vehicles and equipment of approximately 12,320 sf area, for a total size of 14,304sf. The office portion of the facility is of exterior masonry walls, interior wood framed partitions, and a lower roof than the garage. The building was constructed in 1973 and the office part is of adequate size at the present but the garage is undersized for both functions while placed on a limited site not allowing any significant expansion. Based on studies of others the suggested a size of a Highway Department based on population basis suggests a buildings of 25,000 sf in area based on population numbers.

A request was made for a expansion of the garage facility to accommodate another single bay, 24ft wide and full length of the building 70 ft deep. The addition to include an overhead doors at both ends to service and store vehicles and equipment in a protected environment. The addition will be of same kind of construction to match existing metal building construction with an overhead door matching existing in size but meeting new energy codes requirements. Adjacent overhead door sills need a metal or P. T. Wood guardrail needs to be installed facing the driveway and concrete filled metal guardrails at corners of the building for protection from vehicular and equipment traffic. The garage metal roof has translucent panels that are leaking and needed replacing with new metal roofing panels to match adjacent, including required flashing and sealing. Install new insulation to meet new energy codes.

Adjacent to the woodshed structure at the rear of the property next to the salt shed structure and in front of plastic storage tanks, there is a downward ramp as if for loading dock depression. It has plastic traffic cones placed on ground, along the side of the depression and may be in need of guardrails where in excess of 30" in depth. Truck docks are exempt from the guards and where it may have been one in past use, however it poses a vehicular and pedestrian hazard. Filling in the ramp of placing guardrails in needed unless a truck dock is intended.

Handicapped accessibility compliance has not been addressed in office and lockers areas of the facility and it is not in compliance. Office main entry needs the a existing concrete ramp reworked, women's toilet room is too small & needs to be expanded, 2 doors need replacement and all other existing door hardware needs to be changed. Mens overall toilet area is of adequate size but needs partition and fixtures renovations to create new accessible toilet, urinal and hand sink. Shower stall is not presently used needs to be permanently discontinued or modified to meet regulations. It would be advisable to hire an architect to redesign the office area to meet the accessible requirements with a minimum of construction work required by utilizing existing walls & plumbing for optimum utilization of space at minimal cost.

The site is encircled with a chain link fence and swinging gates access to the garage functions which is in need of repair/replacement to provide some minimum security to the equipment and vehicles grounds. Parking areas will be protected by guardrails along buildings and steel pipe bollards at corners and doorways. New pipe bollards are also recommended at all existing doors as existing bollards are not protecting the door openings and door hardware.

### Critical priorities:

C1 Increase size of garage building by adding 1 full parking/service bay, a 24ft wide addition full depth of building and of area 1,680 sf.	Lump sum	\$ 240,000
C2 Replace all 8 translucent roof panels with metal panels	Lump sum	\$ 16,000
C4 Rework existing concrete entry ramp, add landing	Lump sum	\$ 4,000
<b><u>Total Cost of Critical priorities</u></b>		<b><u>\$ 262,000</u></b>

Necessary priorities:

N1 Renovate office area with handicapped toilet and provide handicapped access to as office spaces and functions.	Lump sum	\$ 12,000
N2 Renovate mens locker area toilets to allow for handicapped accessible toilets and access.	Lump sum	\$ 9,000
N3 Replace exterior office entry door & frame	Lump sum	\$ 6,000
N4 Abandoned truck dock guardrail or fill-in	Lump sum	\$ 3,000

**Total Cost of Necessary priorities            \$ 30,000**

Recommended priorities

R1 Install guardrails at all building walls and fences adjacent equipment traffic areas, and at all building corners concrete filled metal pipe bollards.	Lump sum	\$ 5,000
R2 Repair & replace perimeter fence and new metal posts	Lump sum	\$ 30,000

**Total Cost of Recommended priorities    \$ 35,000**

**WWTP Facilities**

Waste Water Treatment Plant facility constructed in 1980 is located in adjacent city of Chicopee and has the treatment facilities along with 3 small buildings and a main has a multi purpose two story building. The main building has spaces for treatment equipment and materials storage, a garage for equipment & vehicles located on first floor, and has operational and administrative functions and offices. The building also provides for locker and shower facilities for employees along with a lunch room on the second floor. It appears to have adequate space in the main building of brick masonry exterior and of steel framing systems. It is in a corrosive environment from the open treatment pools that permeate the air at times and requires materials to be used resistant to chemicals used. The building in general is in fair to good condition, but interior finishes are in need of repainting and some furniture replacement after near 37 years of use. Corrosion of one exterior metal door & frame is in need of repair.

The other 3 buildings are less than 1,000 sf each where the only reported building issues were new roofs are required for the RAS and Gritt buildings which have existing tar & gravel built-up roofs. The facility was constructed in 1980 and is assessed at 3,827,000 by the city of Chicopee. A strong recommendation is to install a minimum of 60 mil thick reinforced PVC as manufactured by Sarnafil, now a division of Sika Corporation - Roofing division, or other manufacturer with a product of rack record of at least 20 years with requested warranty period of 25 year minimum.

Critical priorities:

C1 New roof s for RAS and Gritt 1,900 sf.	Lump sum	\$ 38,000
C2 Remove exist HM door & Frame with new	Lump sum	\$ 6,000

**Total Cost of Critical priorities            \$ 44,000**

Necessary priorities:

N1 Provide office area with new paint and remove & replace existing vinyl tile flooring in area of 4,000sf x \$8/sf	Lump sum	\$ 32,000
N2 Provide new window screens & re-caulk windows	Lump sum	\$ 2,000
N3 Maintenance technician and a maintenance program		<i>Unknown</i>

**Total Cost of Necessary priorities            \$ 34,000**

## Ledges Clubhouse

Constructed in 2007 the wood framed one story building is of very good condition but undersized for the functions served. Major physical deficiency is lack of storage for the restaurant dry goods and support supplies and paper goods. Presently, majority of dry goods are stored in a metal trailer down the road near the maintenance building, and remainder crammed into closets reserved for other purposes. The building is surrounded by major mechanical systems mounted at rear of building while other sides are bordered by road and golf cart paved access road, restricting any outward expansion or for an addition. The facility does have a large covered deck overlooking some of the course and with a spectacular view of mountains in the distance and where the interior areas of the deck is rarely used offering potential areas of creating the needed storage room space.

Issues of the two sets of stairs not meeting building codes of exceeding height regulations and has being a tripping/falling hazard, has already being undertaken with corrective construction in near future.. Both sets of stairs are planned for reconstruction and removed from consideration of this study. It was also discussed that the new stairs will also need intermediate handrails to meet code requirements where handrails are within reach of 30" from any point of the stairs.

The list of important items of need or correction: are a new high speed internet service to replace existing not reliable cell tower, dry goods storage room, replace urinal with toilet in mens room, clear plastic enclosure of deck in lieu of new windows for weather protection. The pavilion used for outdoor banquet type of events is a fully open wood structure with exposed wood trusses creating a perfect environment for nesting birds where their droppings are visible in many areas and a major detriment to its function. It was also noted that the pavilion structure was leaning and in need of corrective structural modifications to keep firm future collapse. The structure needs to have installed lateral structural bracing installed and the facility then realigned to its proper stability. The existing supporting concrete piers need to be excavated to investigate their adequacy for corrective work and new concrete footings and foundations poured to provide support for new structural bracing walls to be constructed and anchored to.

### Critical priorities:

C1 New high speed internet cable system line	Lump sum	\$ 40,000
C2 Dry goods new storage room addition	Lump sum	\$ 20,000
C3 Pavilion building structural modifications	Lump sum	\$ 72,000
C4 Bird netting ceiling of pavilion	Lump sum	\$ 8,000

**Total Cost of Critical priorities                      \$140,000**

### Necessary priorities:

N1 Men's room - replace urinal with new toilet	Lump sum	\$ 3,000
N2 Provide new clear plastic window screens at deck area	Lump sum	\$ 2,000
N3 Provide new clear plastic roll-up wall screens at pavilion building open walls of 840 sf total areas	Lump sum	\$ 12,000

**Total Cost of Necessary priorities                      \$ 17,000**

## **Ledges Maintenance Building**

Town information given states that the building was constructed in 2001, but by appearance along with its condition it may have been constructed earlier. According to some sources it was constructed for a local graphics company chemical storage building and designed for optimum venting of interior chemical storage. The building is of hollow core concrete block walls with venting openings at bottom on interior and exterior surfaces for full vertical wall cavity venting system. The interior also had openings on two sides at roof /wall intersection through soffit areas with bird screening enclosures. The roof is steel framed and of typical construction of metal buildings. Major beams span from wall pier to pier and have metal roof purlins on top of the beams to support an uninsulated roof panels as roof covering and in fair but acceptable condition.

There is no insulation in walls or roof and a portion of the building was divided into a heated repair area with insulated wood framed partition and where batt insulation was stuffed into perimeter vents at the roof and wall vents at floor level were blocked with plywood. The facility has no running water or toilet facilities inside, but did bring a water service to exterior of building to clean grounds equipment, that must be drained for the winter and has had burst pipes in past needing replacing. Due to its initial needs for chemical storage and with no employees running water & sewer were available and not connected. There is now a sewer line installed for the new clubhouse and there is an underground pumping station installed near the building in the road outside the fence & available for connection to.

The grounds maintenance company using the building has a temporary heated portable office trailer with a chemical toilet but it does not satisfy the building codes requirements of the maintenance building. Now that the building serves both storage and repair facilities with employees operating in it, it has to meet the minimum of handicapped accessible men and women toilets are required to be provided for. All of steel structural components show extensive surface only rusting on all exposed surfaces, and in need of rust removal and protective painting to extend the structural integrity of the building. Three external corner connections of roof beams to masonry piers have broken away masonry with exposed connecting bolts that will need to be corrected immediately.

The building is in poor overall condition but of sound steel framing beams and roof purlins and the exterior masonry walls with supporting masonry piers making it suitable for continued use with corrective work. The building could be exempt from the full new energy code compliance by its low energy usage in maintaining lower design temperatures. However it would be prudent economically to insulate the walls and the roof along with blocking of the wall venting and at the roof wall soffit areas be covered and insulated.

Most economical method is to construct an addition for the new handicapped toilets facing the road where water and sewer lines are available. To crate a minimum work environment is to provide an rigid exterior insulation with exterior wall furring applied to masonry exterior with corrugated metal siding panels for exterior. Close off soffit venting areas and provide surface spray on insulation system with a fire protective barrier coating. Remove and clean all rust from metal framing and provide a rust protective coats of paint as required. For a heating system install two ceiling mounted gas fired unit heaters and install pipe bollards at corners of the addition and building to protect from equipment and vehicles.

Critical priorities:

C1 Construct addition with concrete frost wall perimeter for handicapped toilets and install rigid insulation on exterior wall perimeter, and pre-finished corrugated metal wall panels & unit heaters	Lump sum	\$ 75,000
C2 Close off perimeter soffits	Lump sum	\$ 7,000
C3 Clean and paint all structural steel	Lump sum	\$ 6,000
C4 Spray on foam insulation on ceilings with fire protective coating layer	Lump sum	\$ 15,000
<b><u>Total Cost of Critical priorities</u></b>		<b><u>\$ 103,000</u></b>

Necessary priorities:

N1 Clean town storage boxes in soffit areas, clean walls and paint wall surfaces	Lump sum	\$ 5,000
N2 Provide building perimeter new metal pipe bollards	Lump sum	\$ 3,000
<b><u>Total Cost of Necessary priorities</u></b>		<b><u>\$ 8,000</u></b>

Recommended priorities

R1 Install new fence and gates at entry area for security control of premises, equipment and fuel tanks area with flammable warnings signs	Lump sum	\$ 3,000
R2 Provide emergency eye wash station in maintenance work area	Lump sum	\$ 3,000
<b><u>Total Cost of Recommended priorities</u></b>		<b><u>\$ 6,000</u></b>

## Police Station

Completed in 1994 the 16,000 gsf facility the brick faced two story building is in general good condition but after 24 years of operation, the exterior appearance and condition is good but interior wear is showing where it is in need of new flooring in most areas, basement in particular. It is a very complicated building attempting unsuccessfully to achieve too many functions in too little of space. The unfortunate location of an oversized HVAC unit is awkwardly placed in center of building right over the dispatch area and communication center. A vibration isolation system needs to be evaluated by acoustical experts, and confirmed by a structural engineer on structural modifications.

Property evidence room does not offer valuables or other secure storage while the facility needs space for "Records Management System" to house all archived and administrative records. Since there is no available space within the facility it is recommended that at minimum a 1 story addition of 600 sf on south side and a 400 sf addition on north side be considered. The 2 additions would not impact the existing site functions as it would be constructed in lawn areas only. Site utilities need to be evaluate for any potential impact or conflicts. A two story would be ideal but existing roof lines & roofs modifications would be inadvisable and economically unfeasible. A potential exists for purchasing the adjacent abandoned former service station store and demolishing the structure for potential re-evaluation of the combination Town Hall and Police Station site utilization, if both facilities were to remain.

Basement condensation due to AC system malfunction has left damages on all surfaces causing a need of repair and repainting as well. The most viable solution to such problems is installation of a permanent humidity control system for the basement. Front entry system is in need of repair and replacement of front entry doors and interior flooring. Lack of facility basic maintenance and repair program has been repeatedly mentioned for all facilities visited.

Perhaps the major overall problem is that the facility of 16,000 sf should be 27,000 sf in size for a town this size and is approximately 40% undersized and where initially designed and constructed with very limited expansion possibilities due to site restrictions.

The 5 major issues listed for the building are:

C.1 Purchase and install a \$18,000 Records Management System and provide space reorganization design services to reorganize operations.	Lump sum	\$ 24,000
C2 Front entry - Replace front entrance door system	Lump sum	\$ 30,000
-Replace front entry area flooring system	Lump sum	\$ 10,000
C3 Property evidence Room storage space	<i>See proposed addition.</i>	
C4 Basement de-humidification system	Lump sum	\$ 20,000
C4 Exterior lighting repair replacement	Lump sum	\$ 10,000
<b><u>Total Cost of Critical priorities</u></b>		<b><u>\$ 94,000</u></b>

Necessary priorities:

N1 New flooring system entire building 15,000sf	Lump sum	\$ 60,000
N2 Maintenance technician and a maintenance program		<i>Unknown</i>
<b><u>Total Cost of Necessary priorities</u></b>		<b><u>\$ 60,000</u></b>

Recommended prioritiesz

R1 Purchase adjacent vacant building and land for future needs		<i>Unknown</i>
R2 1000 sf addition for records storage @ \$ 350/sf	Lump sum	\$ 350,000
R3 Assign long term secure storage areas in renovated Town Hall basement		<i>no cost</i>
<b><u>Total Cost of Recommended priorities</u></b>		<b><u>\$ 350,000</u></b>

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## Firehouse Museum

The town owned building was constructed in 1910, and is one of oldest and unique structures with a captivating 4 story watch tower. The facility while housing not only some firehouse apparatus, but many historical artifacts and information of the whole town. It is cared for and run and by the historical group members with some volunteer help. For a building its age it is in a satisfactory condition but has some major issues to resolve. It has a slate roof appearing in good condition but the lower flat roof has issues and received a coating of roofing paint by volunteers and is in need of replacement. Exterior lower north facing brick wall needs cleaning of mossy mold growth first and resealing to restore its weather protection. However any such efforts are in vain if a gutter system is not installed to take the water away from the building wall where winds drive the water onto the brick wall below.

The historical group has attempted to have the building recorded as by itself and as part of the area as a historical district but the efforts have not been finalized. The customary historical building codes exemptions cannot be utilized at this time. A historical designation would allow many exemptions of a regular municipal facility building codes requirements and should be advanced as much as possible to also then qualify for substantial federal and state grants lessening the town financial burden.

Most critical is that the egress door is shut and extremely difficult to open as the building shifted, the frame sagged pinning the door or the ground heaving may have caused the shift. The other and equally dangerous situation is the retaining wall at Carew Street which is in process of toppling over as one veneer of stone retaining wall already has. There is also a low retaining wall that is leaning towards the sidewalk and can collapse in near future. A new furnace was installed 2 years ago for the steam heating system which is operational, but needs to be switched over to a lower temperature hot water system from steam as many hot radiators and exposed uninsulated piping is within reach of the public with potential of one burning their hands in the winter, in the stairway, in particular. The other concern of uninsulated and exposed is is the uncontrolled excessive heat loss from the piping when the system is operational.

Fire alarm system has been updated and was recently tested and found in proper working order by the fire department. The staircase windows are of original construction period and in need of replacement as soon as funding is obtained as the leakage of rainwater will hasten the deterioration of stairs and its supporting systems. Some site modifications and regrading at the foundation wall is required, as well as the some method of wall waterproofing is needed to keep the water away from the building at the Carew Street driveway area.

Exterior of building existing siding may be subject to additional historical consideration and appears in well maintained condition.

No substantial corrective work or construction costs are being offered as there is an ongoing surveying of the area sidewalks, park and all grounds surrounding the facility but no other information was available on any proposed corrective work of the sidewalks or the surrounding grounds. It also appeared as noted by one of historical group members that there appears to be a substantial cavity under the sidewalk that was rather deep when previously probed. It seemed as if the noted surveying was a part of potential corrective sidewalk work and the adjacent town park of close to 2 acres.

Critical priorities:

C1 Remove & replace egress door & frame, adjust exterior grade or review in more detail with a structural engineer to see if it is a settling issue and do corrective work, as none was found at the site visit. If no structural issues found, just re-grade concrete and asphalt areas	Lump sum	\$ 15,000
C2 Replace stair-tower windows	Lump sum	\$ 32,000
C3 Repair retaining walls along Carew Street sidewalk		<i>Unknown</i>

**Total Cost of Critical priorities**                      **\$ 47,000**

Necessary priorities:

N1 Clean, repoint and seal exposed brick basement walls	Lump sum	\$ 25,000
N2 Remove & replace existing flat roof including a structural review of existing roof framing system	Lump sum	\$ 8,000
N3 Provide & install storage room shelving for important items not being displayed at the moment, but need safe keyed storage. Also provide display shelving	Lump Sum	\$ 3,000
N4 Maintenance technician and a maintenance program		<i>Unknown</i>

**Total Cost of Necessary priorities**                      **\$ 36,000**

## **Overall Comments & Observations:**

Existing town buildings are still of sound structure, neglected perhaps, but still have historic as well as practical value, Town Hall in particular. Renovating the building may seem not that sound of investment, but it has lasted over a 100 years and if replaced with new, would it last as long? It seems that modern buildings have not yet shown same ability to age as gracefully and last as long. It is a beautiful building that has more than adequate space even for future needs, and even offer storage space for other departments to use or even move their offices into the central facility. The lack of parking could perhaps be remedied by purchasing the adjacent properties that are vacant or underutilized, which can be demolished and additional parking created, as offered as a recommended priority for Town Hall. The adjacent Police station could also benefit from such undertaking for additional parking and has potential for expansions of up 1,000 sf of 1 story additions, if ever needed.

Lack of adequate minimal maintenance is causing continued deterioration of facilities and is in need of change, in particular if new or renovated facilities are made available, preventative maintenance must be initiated to protect the investment of the taxpayers. If loans are undertaken on the new/renovated properties there is a likely probability that it will be a requirement of the financial lender to make certain that the property does not deteriorate and lose value from lack of maintenance that otherwise would extend the life of the facilities and its materials.

However it is not a new issue as ISES corporation, in April 2, 2013 and more than 4 years ago, prepared a document "Facility Maintenance Review" with numerous recommendations on the Town of South Hadley needs to protect the deteriorating conditions of buildings, to decrease the losses in building values, and proposed several strategies. They also ended their report with statements that similar observations were noted in the Town Master Plan adopted August 30, 2010, and "*it does not appear that any progress has been made in addressing these issues*". It does not appear that the strategy chosen since then has not shown any improvements, and where that was the most important issue and a concern raised as the number one problem they all have, is lack of an effective maintenance program. The present system seems to drain their budget allocations with some items repaired or fixed but no real program of continued basic upkeep of their buildings. It is not a unique problem to this town as all communities are in process of controlling the budgets and struggling in maintaining their facilities, but an answer needs to be found as such building neglect will only worsen the budgetary constraints, when new facilities will need to be constructed and where they too will follow same pattern of neglect and accelerated replacement.

There is a noticeable consistent pattern or history of work performed on buildings, of leaving behind items disconnected, or no longer in use, and abandoned in place without complete removal making it difficult in distinguishing what is currently active or in use. Ranging from huge boilers, pipes, ducts, electrical and communications wiring going back to the original exposed knob & tube wiring systems no longer in use since 1930's. All future work needs to include all removal of existing abandoned systems and include provisions of proper removal from premises.

The only organized documentation available on municipal buildings is the assessors department system of property cards information available online, showing approximate building sizes, general types of construction, building renovations and years work performed taken from building permits issued for purposes of building value assessment for the property tax assessments. Such information was found extremely valuable for initial grasp of building properties, however much work was performed where a building permit was not taken out and that work not recorded on property cards showing incomplete information that can mislead any analysis or evaluation of the specific building. Building plans were available for some but lacking the most recent documentation of work performed. Since no system was used in past history, to record and or store them systematically for future retrieval, it would be a major

undertaking to sort through countless documents located in several storage rooms of the town hall. Some communities have hired summer interns from architectural programs, to help sort through vintages of plans to determine which need to be kept for creating a list of all plans in storage and organize in some acceptable manner. Potential scanning to an electronic media for permanent storage system has been found too costly and not yet undertaken in the region.

Interior and exterior appearances of town buildings does not properly represent the beautiful natural surroundings of the region, but depicts facilities lacking of proper care that it deserves, to properly represent its people. It is also showing the financial hard times that this community is facing in balancing its budget and in providing the needed services to its taxpayers, and still maintain an appearance worthy of its people. South Hadley now facing same issues as all communities are for numerous reasons as its customary tax basis no longer seems to support its facilities. As previous outside funding was cut back, employee expenses exceeded allowances, the increasing burden of expenses has fallen to local taxpayers, a seemingly growing concern of all communities now struggling in maintaining its aging facilities.

Preliminary and schematic plans are offered at end of report to better illustrate the proposed actual building plans and to better comprehend its actual plan layouts, as well as any proposed additions.