

SMRT 2006

Exeter Town Hall**Introduction**

This three-story brick building is currently not being used on a daily basis except for about 1,200 square feet in the basement at the street level being leased out to the Chamber of Commerce. There is approximately 1,000 square feet at street level that could be leased to a retail tenant. The basement contains public bathrooms that are separated from the rest of the building by locked doors. The remainder of the basement other than mechanical/electrical/elevator spaces is primarily vacant and suitable for storage only. There are two floors above the basement level. The first floor contains an auditorium/meeting space with no fixed seats. This space also has a stage for performances and a balcony with fixed seating. The second level contains open gallery space and some office/storage space.

Applicable codes: International Building Code 2000 (IBC)
Life Safety Code 2003

The goal of the Building and Life Safety codes is to save lives by:

- Providing 2 exit paths for each floor level and for larger spaces where people can gather.
- Protecting these exit paths from fire to permit more time for egress out of the building.
- Protecting these exit paths from smoke so that occupants are not overcome as they egress out.

If this facility were a new structure being designed today the code would require 2 separate exits from the basement and second floors and 3 exits from the first floor. An exit is defined as an enclosed space that provides a protected path of travel by using fire resistant construction to an exit discharge point. Exits are typically exterior doors at grade and enclosed stair shafts. An exit is required to be enclosed with fire resistant construction because this construction will resist the passage of smoke and/or fire into the enclosure for a pre-determined period of time allowing the occupants enough time to egress out of the building.

Current conditions

The Town Hall building is currently configured reasonably well with regards to exiting.

The basement has 3 exits but one is behind a locked door creating a dead end unless door hardware is changed. One exit is to the floor above but without an enclosure as required by code.

The first floor has 3 exits as is required but the exit behind the stage easily could be argued as not being a valid exit. There are no exit signs and you must go over the stage and through the stage curtains to find it. This exit appears to have been intended as

egress from the back stage area and from the second level. The exits do not qualify as enclosed exits as required by code.

The balcony level has 3 exits, one to the exterior via a fire escape and two down to the first floor, however, the dead end limit for fixed seating is violated on this level.

The second level has 3 exits. One is to the exterior and down a fire escape. The other two exits do not meet code requirements for enclosures and the back stair contains a door part way down opening over the stairs which is not allowed by code. This stair should also have an intermediate landing by code.

Exit enclosures are not allowed to have openings into them other than exterior openings and those necessary for exit access. Therefore storage closets and restrooms cannot open into exits. Some existing storage rooms need to be reconfigured to comply with code.

Options

The existing Town Hall is a large assembly space that could potentially have over 1,000 occupants according to the code. This occupant load creates additional exiting requirements that are generally met, however some improvements are required to meet the code.

- A. Provide Exit Enclosures that meet code requirements.
- B. Post occupancy limits for all major assembly spaces.
- C. Upgrade smoke detection and fire alarm as required.
- D. Reconfigure basement level exiting.

A. Provide Exit Enclosures:

1. Install closers and magnetic hold opens (where desired) on all doors into lobby/stair spaces on first and second floors.
2. Verify all doors into lobby/stair spaces are solid wood or rated doors.
3. Replace all glass in doors into lobby/stair spaces with wire glass or fire glass as required by code or remove glass.
4. Verify and repair all walls of exit enclosure to be 1-hour fire rated.
5. Enclose basement stair with fire rated enclosure and door to protect the lobby/stairs above from potential fire in basement.
6. Configure the first floor lobby such that the stairs exiting from the basement are separated from the lobby and do not exit through another room.
7. Enclose back stage stair at first and second floors and remove intermediate door in stair

B. Post Occupancy limits:

Post Occupancy limits at auditorium, balcony and gallery levels such that the total combined occupant load is less than 1,000.

Exeter Town Offices

Introduction

This two-story brick building is currently being used for the Town of Exeter's municipal offices. There are two floors above grade currently being used as business and assembly occupancies. The unfinished basement contains mechanical, electrical and building storage.

Applicable codes: International Building Code 2000 (IBC)
 Life Safety Code 2003

The goal of the Building and Life Safety codes is to save lives by:

- Providing 2 exit paths for each floor level and for larger spaces where people can gather.
- Protecting these exit paths from fire to permit more time for egress out of the building.
- Protecting these exit paths from smoke so that occupants are not overcome as they egress out.

If this facility were a new structure being designed today the code would require 2 separate exits from each floor. An exit is defined as an enclosed space that provides a protected path of travel by using fire resistant construction to an exit discharge point. Exits are typically exterior doors at grade and enclosed stair shafts. An exit is required to be enclosed with fire resistant construction because this construction will resist the passage of smoke and/or fire into the enclosure for a pre-determined period of time allowing the occupants enough time to egress out of the building. A second egress option is required in the event fire and/or smoke is blocking one exit option, thus the reasoning for having 2.

Current conditions

The Town Offices building is currently configured in such a way that the main lobby is the only means of egress for nearly the entire first and second floors. Only occupants of the Public Meeting room on the second floor have a second egress option and it is up some steps, out a window and down a fire escape. This is allowed by code as a second exit but it currently does not meet the remoteness requirements of the code for an exit of the entire floor. (Exits are too close to each other). Occupants in portions of the first floor have to pass through a maze of other spaces to have a second egress option. If a fire were to compromise the lobby on either floor the occupants would be in great peril. Exit enclosures are not allowed to have openings into them other than exterior openings and those necessary for exit access. Therefore storage closets and restrooms cannot open into exits. Elevators are not allowed to open into exit enclosures. In the existing building each of these currently are compromises to safety.

FINDINGS

The building lacks any mechanically provided fresh air ventilation. Except for a small area in the basement, most of the building is occupied only intermittently, so there is limited need for continuous occupied ventilation. However, the basement has had ground water leakage issues and concern has been raised over indoor air quality issues. Fresh air ventilation would help control musty smells and improve air quality. Also, with a large assembly in the auditorium, it is likely that ventilation would be necessary to keep carbon dioxide levels down. The toilet rooms and janitor room should be equipped with functioning exhaust to meet code.

Exeter Facility Study

Structural Evaluation

Town Offices

The town office building was constructed in two phases. The exact dates of construction are not known. In 1994 an elevator was added. At some point, probably at about the same time, a concrete ramp was added at the entrance to permit handicapped accessibility.

Both the original construction and the addition have floor framing primarily concealed by ceilings. What areas could be observed are framed with dimensioned lumber. In the original building, there are arched ceilings constructed of clay tile beneath and above areas that were previously used as vaults. It is not evident if the clay tile was intended to serve some structural purpose in supporting the floors above. We believe that the tile was used to fireproof the room and that it was built as an arch because that permitted it to be built as a freestanding element, without relying on the timber floor framing for support. That belief is supported by the fact that the same construction was used over the second floor vaults, which allows the upper surface of the ceilings to be exposed in the attic. There it can be seen that the arched ceilings are not serving any structural purpose other than to support themselves. No cracks or other indications of distress were observed in the ceilings and we did not observe any indication of movement in the floors in the rooms above. Where the elevator was added, concrete masonry shaft walls were constructed in such a manner as to interrupt one of the arched ceilings and the floor framing above. The drawings for the shaft construction detail angles, attached to the new masonry, that were used to support the ceilings. However there are no indications as to how the floor framing was attached to the wall. Presumably, this is a detail that was resolved during construction. Access to the second floor is provided by a series of open stairs and balconies. The heavy timber framing used for the balconies is exposed from beneath. All of the framing and connections are in good condition.

At the addition, the area that was designed to support a new vault is constructed of cast-in-place concrete. The remainder of the floor framing is timber. At one area of the basement a portion of the ceiling could be removed to inspect the floor framing. The joist size and span at that location are adequate to support the current code-specified loading for an office occupancy. We did not observe any cracking, movement, or other indications of distress for the supported floors. It should be noted that there are two areas beneath the first floor with no access for inspection. These areas are located at the west end of the original construction and at the southeast corner of the addition. Both areas are labeled as "unexcavated" on the drawings for the addition. It is not clear if the floors in these areas are constructed of concrete bearing on soil or if there is timber framing over a crawl space. If significant renovations are planned for the building, it is suggested that the floor construction in these areas be exposed to verify the material. If wood framing was used, its condition should be evaluated.

Recommendations

It will be difficult to make this building meet code completely without a major renovation that would dramatically change the historical value of the building. Therefore recommendations are based on the assumption that the local authority having jurisdiction will work with the Town of Exeter to find a balanced approach between improving life safety and building code deficiencies while maintaining the existing building configuration and historical value.

The critical need is to improve the safety of the existing single exit since providing a functional second stair is not reasonably possible with the existing building configuration.

1. SMRT recommends that all of the items in A, B and C be implemented.
2. Items D and E are optional but should be considered in consultation with the local authority having jurisdiction.

The roof framing for the original building consists of full sized 2x12 rafters at 12 to 14 inches on center spanning in a hip configuration. At the long side of the original building, the rafters are provided with an intermediate support consisting of 8x12 timber beams, with knee braces. Both the beams and the knee braces are supported by brick piers, approximately 20 inches by 20 inches in cross-section. There is some water staining localized where the chimneys project through the roof. The height of the framing at that location made it inaccessible for a close evaluation. Elsewhere the timber framing and the one inch nominal thickness board roof deck were found to be in good condition. At the exterior walls, the rafters bear in pockets in the masonry. This prevents a direct connection between the attic floor and the roof framing. There can be a tendency for rafter ends to absorb moisture and deteriorate when this detail is used. At this time there are no visible signs that such deterioration is taking place. However, our evaluation is limited to what can be seen at the surface. It is possible that a problem could exist in the bearing pockets that we would not have seen.

At the addition the roof is framed with dimensioned lumber in an extension of the hipped roof configuration. Where the new ridge intersects at 90 degrees from the ridge of the original roof, the new rafters bear on the framing and deck of the original construction. Rafters are standard, planed 2x10 members at 14 to 16 inches on center. Rafters are supported at intermediate points by two 8 inch thick brick bearing walls and a timber/tie rod truss perpendicular to the walls. The truss is in a king post configuration with a 4x6 Douglas fir post at midspan, a 1 inch diameter steel rod as a bottom chord, and a top chord consisting of 2 - 1-3/4x9-1/4 timber beams and a 1 inch spacer to facilitate the rod connection at the end. We did not observe any visible indications of deterioration or distress during our evaluation.

Except at the basement and attic, the interior, load-bearing, brick walls are covered by building finishes. Where the interior walls could be observed, they were found to be in good condition. The perimeter brick walls are also load-bearing. There are some stepped cracks between the window jambs and the building corners and at other isolated locations that have been repaired. Such cracking is not uncommon with brick masonry. However, simply repairing the crack may not prevent its recurrence. As an open crack admits water, it will worsen the deterioration and there is potential that it can promote deterioration of joist ends where they are set in the walls. Hence it is critical that the perimeter cracks be repaired and that recurring problems be addressed in order to retain the integrity of the structural system. The brick walls also provide resistance to lateral loads. While there is more than enough resistance to wind loads, the capacity of unreinforced masonry to resist seismic loads is very limited. Hence it is best to have as much uncracked wall available as is possible to provide adequate resistance for a seismic event.

The original building foundation is constructed of a combination of brick and stone. At the addition, cast-in-place concrete was used. No indications of settlement or other movement were observed. It is reported that there is some flooding that occurs in the original basement when the groundwater table is high. Trenches exist in the basement to provide a path for the water to exit. It is suspected that there may not be a perimeter foundation drainage system in place. If any thought is given to upgrading this space, it

will be important to install a new foundation drain or repair the existing one so that it is more functional. At the entrance, a cast-in-place concrete ramp was constructed. There is significant spalling and deterioration of the concrete wall of the ramp. At the damaged area, the concrete at the surface appears to be very porous and susceptible to further water absorption, which will promote further deterioration.

Despite the apparent good condition of the structural aspects of this building, there are deficiencies with respect to current code, which may influence future alterations to the building:

- Seismic Load – This is a load case that was not envisioned by the original designers or the designers of the addition. The brittle, yet stiff, nature of unreinforced masonry bearing walls gives them a combination of higher seismic loads and lower resistance to those loads. A seismic analysis of the building is beyond the scope of this study, but based on our experience with similar buildings, we anticipate that there are deficiencies in the board sheathing roof deck diaphragm, the connections of the roof to the perimeter masonry bearing walls, and the perimeter masonry southeast and northwest walls.
- Wind Load – The roof framing members do not have adequate connections to supports to resist wind uplift loads specified by current codes.
- Snow Load – The hip roof configuration relies on a horizontal tie in one direction to retain its stability under snow load. Since the attic floor is not directly connected to the rafters, there is no clear load path by which the attic floor could serve that purpose. No other horizontal tie beams are provided. Hence there is an instability, which could cause failure of the roof system under snow load. Our analysis also indicates that some of the rafters in the original building, and most of the rafters in the addition are overstressed under the unbalanced snow load specified under current code. Last, the king post truss which is part of the addition roof is overstressed at the top chord, and the king post. Details of the connection at the bearing were concealed and therefore could not be evaluated.
- Timber Framing – Lumber observed for the original construction was found to be ungraded. This is standard for older structures. On past projects, where ungraded lumber has been used, close evaluation of the in-place framing has revealed that much of the lumber is substandard, with some members containing defects that should have rendered them unsuitable for structural use. As the strength of wood framing varies significantly with the grade, it should be expected that all floor and roof framing is constructed of materials with varying strength. If modifications are done that would increase the loading, such as adding insulation to the roof, we would recommend that the framing be graded and that any reinforcement be designed based on the actual grade and species of each framing member. Such an evaluation will be more difficult for an increase in floor loading. If this occurs, it will be necessary to remove ceilings below the area to perform a similar evaluation.

Exeter Town Offices

Electrical Narrative

J. Perruzzi

11/30/05

Existing Conditions

Power

The facility was surveyed with Kevin Smart, Maintenance Superintendent, on November 30, 2005. The facility is served by a 400A, 208Y/120V, three-phase, four-wire electrical service. The service enters the building underground, from a pole mounted transformer, located on Front Street. A revenue meter is mounted on the building. Latest demand displayed is 15.69kW. It is unknown what, if any, the multiplier may be but there appears to be a current transformer (CT) cabinet mounted below. A 400A, 208Y/120V, three-phase, four-wire, main breaker service panel is located in the basement. It was installed in April of 1995. Short circuit rating is 10,000A symmetrical. Sub panels are located throughout the building. Most are in good condition. Some are single phase 208/120V and some are three phase. Sub panels have been added in the past few years in an attempt to alleviate overloaded circuits by adding additional circuits.

A small propane gas powered generator is located outside. It is rated 5.3 kVA, 240/120V, single phase, is manufactured by Kohler, and appears to be in fair condition. It has 40 hours of run time on it. There is a fair amount of sunflower seeds inside the enclosure suggesting that animals have been living there. It is used to provide back-up power for the furnace.

Wiring Methods

Wiring within the building is by single conductor wires in EMT conduit, single conductor wires in surface raceway and metal clad cable. Any new wiring installed is surface mounted as no access can be gained in the walls.

Lighting

Interior lighting is primarily fluorescent. Acrylic lensed troffers, surface and strip fixtures predominate.

No battery backed-up egress lighting units or exit signs were seen.

Communication Systems

Communication wiring enters the facility in the basement. Category 5 wiring is installed for both voice and data wiring. Media Connects is the system provider. The wiring appears in good working condition.

There is a security system installed with a keypad located in the front lobby area.

Fire Alarm System

The building is not sprinklered. Detection is by smoke and heat detectors. A 4 zone fire alarm panel, manufactured by FCI, is installed in the basement. According to Kevin, a coded signal is sent from here to the fire department. No zone labeling on the panel. A 4 zone LED lamp annunciator panel is located in the front vestibule area. It has labeling of Zone 1 - cellar, zone 2 - 1st floor, zone 3 - 2nd floor and zone 4 - attic. Pull stations are located at the exits. They appear to be installed above the maximum ADA height. Smoke and heat detectors are installed in various areas. Old non-ADA compliant horn/strobe notification appliances are installed. Coverage is inadequate.

Recommendations if the building is renovated

The main service panel was replaced 10 years ago and should be adequate unless a major load is added. Power strips are heavily used due to the lack of wall mounted outlets. Additional outlets and circuits should continue to be added to alleviate overloaded circuits. Consideration should be given to replacing the existing single phase panelboards with three phase panelboards to better balance loading of the phases.

The interior of the small 5.3kVA propane gas powered generator enclosure should be cleaned. If it is not currently done, the system should be tested in accordance with NFPA 110.

Interior lighting appears adequate but should be evaluated, and possibly replaced, in any renovation. Battery pack egress lighting and LED exit signs should be added to provide safe egress in the event of a power failure.

Communication wiring appears adequate and no changes are required at this time.

The existing fire alarm system should be replaced as it outdated and notification appliances do not meet current ADA requirements. Pull stations should be lowered to meet ADA code. Consideration should also be given to sprinkle the building.

Options

The existing Town Office would require complete reconfiguration to meet the requirements of the code. Due to the historic nature of the building this may be undesirable and other options should be sought which would achieve the objectives of the code. Options include:

- A. Protect existing single exit by separation from other spaces.
- B. Provide smoke detection and alarm to give occupants early notice of a fire to increase the time they have to exit.
- C. Provide smoke evacuation from existing lobby/stair to further protect occupants while they exit.
- D. Provide a sprinkler system to limit the possibility of a fire.
- E. Construct an enclosed rear egress stair at exterior of the building to serve as a second exit for first and second levels.

A. Protect existing single exit:

- 1. Remove the storage closet door at the bottom of the stairs on the first floor and install a new door into the storage closet from the employee break room.
- 2. Install closers and magnetic hold opens (as desired) on all doors into lobby/stair spaces on first and second floors.
- 3. Verify all doors into lobby/stair spaces are solid wood or rated doors.
- 4. Replace all glass in doors into lobby/stair spaces with wire glass or fire glass as required by code, or delete where not needed.
- 5. Verify and repair all walls of exit enclosure to be equivalent to 1-hour fire rated construction.
- 6. Install smoke curtains at lobby elevator doors.
- 7. Enclose basement stair with fire rated enclosure and door at stair bottom to protect the lobby/stairs above from potential fire in basement.
- 8. Verify and repair condition of floor assembly above basement at the lobby/stair to provide no less than 1-hour fire rated protection from basement.
- 9. Remove combustible fixtures and materials from lobby/stair at both levels.
- 10. Provide class A finish materials in lobby/stair.

B. Provide smoke detection:

Install smoke/heat detection throughout the entire building including the basement and attic spaces. This, in conjunction with a fire alarm system, will provide early warning of a potential fire hazard allowing occupants to start their egress earlier during a fire event.

C. Provide smoke evacuation:

As part of mechanical system upgrades, configure an exhaust system to evacuate smoke from the lobby/stair and provide fresh air upon detection of smoke. This is a substantial benefit to exiting the second level, as smoke can gather very quickly in that space. Having the smoke mechanically removed will greatly increase occupant's ability to safely egress.

D. Provide automatic sprinkler system:

Install automatic sprinkler system in the entire building, which would greatly reduce the possibility of any potential fire from spreading.

E. Construct enclosed second exit:

As stated previously the code requires 2 exits from each floor. The code also requires 2 exits from assembly spaces with more than 50 occupants such as the public meeting room on the second floor.

The construction of a second stair enclosure at the rear of the building would provide a true second exit from the public meeting room that would be much safer for people who are not physically able to use a fire escape.

This second stair would also serve as the second required exit for the first floor. To achieve this the receptionist will need to be relocated and the town clerk windows will require fire shutters to be installed over them. The existing reception area walls would need to be equivalent to 1-hour fire rated construction. The existing exit door could be designed into a new stair enclosure but more office space would be lost in order to gain access. If this option is selected, note that some fire wall requirements may not be required if fire sprinklers are added.

The basement level essentially is an un-occupied space. Though not ideal, exiting exits meet code intent assuming that the stair is enclosed with a fire rated enclosure and door at the bottom.

ADA

An attempt at ADA compliance was done in the past and for the most part is sufficient. There are some door swing and push/pull clearance issues still existing. These issues may be able to be solved by adding lever locks and power door operators in some cases. Reconfiguration of some spaces will be required for full compliance. If the space remains largely un-renovated the local authority having jurisdiction may not require ADA compliance. However, a major renovation will require ADA compliance.

EXETER TOWN OFFICE
EXISTING MECHANICAL, PLUMBING, AND FIRE SPRINKLER SYSTEMS
REPORT
11-11-05

EXISTING CONDITIONS

Mechanical Systems

Three Teledyne Laars, Modutherm Series JN, gas fired boilers are located in a basement boiler room. Two have an input capacity of 175 MBH and the third has an input capacity of 250 MBH. The boilers were all installed in 1978. Combustion air is ducted to the boiler room from a window located in a nearby crawlspace. The units have ANSI category I atmospheric vent, which is routed to discharge above the roof.

The heating water is distributed though a one-pipe diverting tee system. The piping is split into two circuits in the basement. Flow from each heating circuit is diverted to risers serving finned radiation on the upper floors and then returns back to the same circuit. A single Taco inline pump provides circulation.

Most of the heating is provided by perimeter finned tube baseboard fitted with self-contained unit mounted thermostats. Three convectors are located in the lobby on the first floor and in the large meeting room on the second floor.

There is very limited supply of tempered outside air ventilation provided to the building. Two window mounted RecoupAerator units have been installed to serve two separate office areas on the first floor. The units each provide approximately 130 CFM of filtered outside air and exhaust the same amount of room air. Heat exchangers in the units allow some preheating of the cold intake. In an attempt to bring additional outside ventilation into the building, three exhaust fans have been installed, one in the attic and two in the basement. Their purpose is to create a negative building pressure and cause an increase in building infiltration.

Two toilet rooms, one on the first floor and one on the second floor, each have dedicated exhaust. Several ceiling mounted paddle fans are located throughout the building to provide air movement.

Two wall-mounted grilles on the second floor are connected to shafts that open to the attic.

Simple controls are in place to allow some time-of-day control of boiler operation and reset of heating water temperature according to outside air temperature.

Window mounted air conditioners are installed in the summer to provide localized air conditioning.

Plumbing Systems

Domestic water is piped to the front of the building into the basement. A 30 gallon electric water heater is located in the basement. A toilet room is located on each floor and there is a janitor sink at the top of the basement stairs.

Three sump pumps have been installed in the basement.

Natural gas is piped from the street to a meter located near the entry ramp. The gas is piped to the three boilers.

A small propane tank is located behind the building and piped to an emergency generator.

Fire Sprinkler

There is no fire sprinkler coverage of this building.

FINDINGS

The most significant issue to note is the lack of mechanically introduced fresh air ventilation. The International Mechanical Code 2000, adopted by New Hampshire, calls for 20 cfm per person in office buildings. While some ventilation is provided through the RecoupAerator units, it is far below the prescribed amounts and is only supplied to two localized areas. The amount of air introduced into the building through infiltration is unknown and would be unevenly distributed. In cold weather, this outside air is being pulled in through leaky windows, is also adding to occupant discomfort in some areas. In addition, because infiltration enters the building unfiltered, pollen, dust, and other particulates enter into the building with it. Finally, the basement has had a history of ground water problems. Open sumps and damp areas can impact humidity levels and create concern over indoor air quality. Installation of tempered and filtered fresh air ventilation, properly distributed throughout the building, would help improve indoor air quality and help control musty smells.

The boilers are 28 years old and have exceeded their useful life. The combustion air supply should be reviewed for conformance with code requirements.

There is limited ability to control flow and temperature in the hot water distribution system. The system does not allow balancing of the individual risers to the finned radiation. As return water flows back into the circuit, it cools the supply to units piped downstream. There were complaints of some areas being cold.

The two ventilation grilles on the second floor connected to shafts that open into the attic allow cold air to drop down into occupied spaces.

Baseboard radiation is located behind furniture in a number of locations, making access for cleaning the finned elements difficult and impacting the units' performance.

The employee break room lacks ventilation and exhaust to contain cooking odors.

EXETER TOWN HALL
EXISTING MECHANICAL, PLUMBING, AND FIRE SPRINKLER SYSTEMS
REPORT
11-11-05

EXISTING CONDITIONS

Mechanical Systems

Two Buderus model GE 315 boilers with gas fired Riello Burners provide heating hot water for the building. The boilers along with boiler room piping mains, in-line pumps, and expansion tank were installed in 2004. The boilers are located in a basement boiler room, with combustion air supplied through sidewall louvers. The system is configured for primary/secondary pumping. Two secondary pumps have been installed, one functioning as a manually selected back-up pump. The system utilizes constant volume pumping and is configured for six distribution circuits. A Tekmar controller was installed to allow for supply water temperature reset based on outdoor air temperature.

The building is heated by perimeter finned tube radiation. In 2004, control valves were installed on most units along with wall mounted thermostats to allow for individual space/zone control. Minimum secondary pump flow is maintained by installation of some constant flow bypass and continuous flow through radiation in a basement side entry area.

Two manually controlled ceiling mounted paddle fans are installed in the auditorium.

The toilet rooms do not have functioning exhaust systems.

Two roof mounted gravity ventilators are ducted to ceiling grilles located above the mezzanine seating area. The airflow path has been blocked off.

Plumbing Systems

The water entrance was not located during the site visit. There is a 40 gallon electric water heater in the basement janitor room. Three toilet rooms and a janitor's sink are located in the basement.

Gas enters the front of the building and the meter is located inside the building. The gas is piped to the boiler room.

Fire Sprinkler System

The fire sprinkler entrance is at the front of the building. Sprinkler coverage has been installed throughout. The street pressure noted at the entry is between 60 and 80 psi.

On the 1931 drawings, the foundations are indicated as being cast-in-place concrete. In reviewing the condition of the perimeter walls, we did not observe any indications of settlement or other foundation movement.

Despite the apparent good condition of the structural aspects of this building, there are deficiencies with respect to current code, which may influence future alterations to the building:

- Seismic Load – This is a load case that was not envisioned by the original designers. The brittle, yet stiff, nature of unreinforced masonry bearing walls gives them a combination of higher seismic loads and lower resistance to those loads. A seismic analysis of the building is beyond the scope of this study, but based on our experience with similar buildings, we anticipate that there are deficiencies in the board sheathing roof deck diaphragm, the connections of the roof to the perimeter masonry bearing walls, and the perimeter masonry east and west walls.
- Wind Load – The existing roof framing members do not have adequate connections to supports to resist wind uplift loads specified by current codes. It is presumed that this loading was addressed by the designers of the new framing and that the connection details reflect this consideration.
- Snow Load – Our analysis indicates that some of the rafters are overstressed under the unbalanced snow load specified under current code.
- Timber Framing – Lumber observed for the original construction was found to be ungraded. This is standard for older structures. On past projects, where ungraded lumber has been used, close evaluation of the in-place framing has revealed that much of the lumber is substandard, with some members containing defects that should have rendered them unsuitable for structural use. As the strength of wood framing varies significantly with the grade, it should be expected that all floor and roof framing is constructed of materials with varying strength. If modifications are done that would increase the loading, such as adding insulation to the roof, we would recommend that the framing be graded and that any reinforcement be designed based on the actual grade and species of each framing member. Such an evaluation will be more difficult for an increase in floor loading. If this occurs, it will be necessary to remove ceilings below the area to perform a similar evaluation.

Exeter Facility Study

Structural Evaluation

1855

Town Hall

The original date of construction is not known. In 1931, the building was modified by removing the fill on the Water Street face of the building and creating a façade out of what had previously been a basement wall. There were considerable interior renovations constructed at the time and a concrete retaining wall was built. A significant structural repair was done to the balconies at some early point in the building's history. It is reported that the balconies were originally hung from the structure above. The alterations included adding structural steel beams, girders, and Lally columns. The building was modified in more recent history to include an elevator and a ramp was built at the south entrance for handicapped accessibility. In 1999 and 2000, a substantial structural repair project took place. It included arresting an area of the second floor that was on the verge of collapse and strengthening the roof framing.

The building is constructed of dimensioned lumber and heavy timber. The large areas at the main hall and the second floor created the need for clear-span trusses. This was achieved by locating the trusses in the attic and providing hangers to the floors below. This resulted in a complex system, which apparently became overloaded. At the location of the repair on the second floor, substantial deflection was allowed to avoid inducing movement at the masonry supports for the truss. All of the floor framing at the elevated floors is concealed by building finishes except at a few isolated areas where ceilings were not installed above the ground floor. There it was observed that 2 inch by 11 inch joists were used to span rooms that are roughly 11 and 13 feet. The size and span of these framing members is in the range of what would generally be considered acceptable to support the 100 psf live load mandated by current code.

The roof framing has been the source of intensive study in 1999 and 2000, culminating in a major repair of the timber framing and masonry supports. It is not within our purview to perform a peer review of the work that was done. It is presumed that the work was inspected by the designer at the time of construction in order to verify completeness. During our review we did note that, one heavy timber truss bearing, near the northwest building corner, has deteriorated due to water damage. This is apparently similar to the problems that occurred at other locations that were attributed to roof leaks. The trusses support rafters that are 3 inches by 5 inches at 20 inches on center. These members are undersized for the spans required.

The perimeter walls are load-bearing, multi-wythe brick walls. In general the walls appear to be in very good condition. Isolated cracking was observed beneath the first floor widow at the northeast building corner. At the same corner, a brick has fallen out of an arch above a window. Since brick arches rely on compression for stability, removal of a brick severely compromises one's integrity. Other problems observed were at the brownstone water table and the other decorative brick units.

C. Upgrade smoke detection and fire alarm:

Upgrade/install smoke and heat detection throughout the entire building including the basement and attic spaces. This in conjunction with an upgraded fire alarm system will provide early warning of a potential fire hazard allowing occupants to begin their egress earlier in a fire increasing safety.

D. Reconfigure basement level exiting:

Renovate the exits currently passing through the public restrooms to meet code requirements. Relocate exit points and allow the restrooms to have their own entrance and exit separate from the egress path. This solution will require the loss of some storage, tenant and possible tenant space to egress corridors.

ADA

An attempt at ADA compliance was done in the past and for the most part is sufficient. There are some door swing and push/pull clearance issues still existing. These issues may be able to be solved with adding lever locks and power door operators in some cases. Reconfiguration of some spaces will be required for full compliance. Most issues are in the basement level and reconfiguration of some spaces will be required to comply should this space be used in the future. There are miscellaneous ramp and handrail issues to address as well.

Recommendations:

This building is not far from meeting code in its current configuration and occupancy. Any change in use will require code study based upon the change. Therefore recommendations are based on the assumption that the local authority having jurisdiction will work with the Town of Exeter to reduce life safety and building code deficiencies while maintaining the existing building configuration and historical value.

The critical need is in upgrading the safety of the existing exit enclosures.

1. SMRT recommends that all of the items in A, B, C and D be implemented.
2. Should the vacant portions of the basement level be used for office use it is recommended that the floor assembly above be verified and repaired to provide no less than 1-hour fire rated protection of that floor structure.

The Town of Exeter
Draft Architectural Program
 December 19, 2005

| No. | Component | Persons/Units Per Area | Number of Areas | Space Requirement | NSF | Gross Factor | GSF | Notes |
|------------------------------------|----------------------------|------------------------|-----------------|-------------------|-----|--------------|--------------|--|
| TOWN HALL | | | | | | | | |
| 1.00 | Town Clerk | | | | | | | |
| 1.01 | Customer Service | 3 | 1 | 350 /area | 350 | 1.40 | 490 | 15' counter with cashier stations and back counter with files/storage, night secure. 50 visitors per day. Copier. Bookshelf for blue books. 15" x 3' side table at each cashier for equipment and forms. Glass protection from public. Night shutter or room door to secure space. Customer drop box. License plate storage. |
| 1.02 | Staff Open Office | 1 | 7 | 100 /area | 700 | 1.40 | 980 | 7 work stations behind back counter of Customer Service area. Copier/printer (may be same as at counter.) Two vertical files. Bookshelves at each desk overhead. Back counter must be secure. |
| 1.03 | Town Clerk | 1 | 1 | 160 /area | 160 | 1.40 | 224 | Private Office, two two-drawer files, room for two guests, located to supervise customer service. |
| 1.04 | Safe | 0 | 1 | 6 /area | 6 | 1.40 | 8 | Near cashiers. |
| 1.05 | Records Vault | 0 | 1 | 600 /area | 600 | 1.40 | 840 | Shelves on all walls. 2 hour rated fire vault. |
| 1.06 | Public Lobby Area | 12 | 1 | 200 /area | 200 | 1.40 | 280 | Public notices bulletin board/area. |
| TOTAL | | | | | | | 2,822 | |
| 2.00 Finance | | | | | | | | |
| 2.01 | Director | 1 | 1 | 160 /area | 160 | 1.40 | 224 | Private Office, view of service counter. 3 file cabinets. |
| 2.02 | Payroll/ Accounts Pay. | 1 | 1 | 120 /area | 120 | 1.40 | 168 | Private Office. 2 Computer Stations (billing and payroll), 4 file cabinets, 2 storage cabinets, 1 card file, 1 typewriter |
| 2.03 | Finance Reception | 1 | 1 | 150 /area | 150 | 1.40 | 210 | Computer work station/cashier station, printer/copier, 3 two drawer files, 1 storage cabinet. Service counter with glass. Cash drawer. Rear exit. |
| 2.04 | Finance Assistant (Future) | 1 | 1 | 80 /area | 80 | 1.40 | 112 | Open office work station. |
| 2.04 | Finance Visitors | 3 | 1 | 80 /area | 80 | 1.40 | 112 | Waiting area for public access to counter. |
| TOTAL | | | | | | | 826 | |
| 3.00 Welfare | | | | | | | | |
| 3.01 | Director | 1 | 1 | 220 /area | 220 | 1.40 | 308 | Private Office with a nook for children, room for five guests. A panic button to police and a second exit required. Waiting area in lobby required. Entry should have controlled access which is provided by a Dutch door now. Space for pamphlets. Copier/printer. One bookcase, 3 file cabinets. |
| 3.02 | Intern | 1 | 1 | 80 /area | 80 | 1.40 | 112 | Work space only. |
| 3.03 | Storage Closet | 1 | 1 | 16 /area | 16 | 1.40 | 22 | Records storage. Could be file storage. |
| 3.04 | Wallace Waiting | 3 | 1 | 80 /area | 80 | 1.40 | 112 | May be shared waiting area. |
| TOTAL | | | | | | | 554 | |
| 4.00 Information Technology | | | | | | | | |
| 4.01 | IT Manager | 1 | 1 | 120 /area | 120 | 1.40 | 168 | Furniture should include a work bench and a desk/computer station. |
| 4.02 | Equipment Closet | 1 | 1 | 80 /area | 80 | 1.40 | 112 | Need air conditioning for equipment. A patch panel needs to be located in this room with 100 sf of wall surface. Lots of outlets please. Dry and secure room. |
| TOTAL | | | | | | | 120 | 280 |

The Town of Exeter
Draft Architectural Program
December 19, 2005

| No. | Component | Persons/Units Per Area | Number of Areas | Space Requirement | NSF | Gross Factor | GSP | Notes |
|--------------|--|---------------------------|--------------------|----------------------|--------------|-----------------|--------------|---|
| 5.00 | Town Assessor | | | | | | | |
| 5.01 | Town Assessor | 1 | 1 | 160 /area | 160 | 1.40 | 224 | Room in office for two guests at small conference table, 6 file cabs, drawing board. |
| 5.02 | Assessor Clerk/Reception | 2 | 1 | 120 /area | 120 | 1.40 | 168 | Computer work station, 8 files, typewriter station, flat file, forms file, public service counter, Copier/printer. |
| 5.03 | Waiting | 3 | 1 | 80 /area | 80 | 1.40 | 112 | Room for six file cabs, and maps on a wall rack plus a work table for guests to review records. Six visitors per day. |
| TOTAL | | | | | 360 | | 504 | |
| 6.00 | Planning/ Code Enforcement | | | | | | | |
| 6.01 | Planner | 1 | 1 | 160 /area | 160 | 1.40 | 224 | Private Office, 3 bookshelves, 6 files. Private office with view of reception area. 2 guest chairs, drawing table, Pendaflex holder, flat drawing file. |
| 6.02 | Assistant Planner (Future) | 1 | 1 | 80 /area | 80 | 1.40 | 112 | Open office work station. |
| 6.03 | Code Enforcement | 1 | 2 | 120 /area | 240 | 1.40 | 336 | Private Office, building, electrical, plumbing. Line of sight oversight of service counter. |
| 6.04 | Admin. Assisr/Reception | 2 | 1 | 120 /area | 120 | 1.40 | 168 | Reception counter with cash drawer. Two work stations. One copier. |
| 6.05 | Waiting | 3 | 1 | 100 /area | 100 | 1.40 | 140 | Waiting area for two with chairs and computer work station for public search. |
| 6.06 | Work Stations | 1 | 2 | 80 /area | 160 | 1.40 | 224 | Work stations for conservation, zoning inspector. |
| 6.07 | Plan File Area | 0 | 1 | 120 /area | 120 | 1.40 | 168 | Flat file, drawing table, drawing tubes. |
| 6.08 | Admin. Storage | 0 | 1 | 100 /area | 100 | 1.40 | 140 | 10 files. Small refrigerator. |
| TOTAL | | | | | 1,080 | | 1,512 | |
| 7.00 | Administration | | | | | | | |
| 7.01 | Town Manager | 1 | 1 | 200 /area | 200 | 1.40 | 280 | Private Office (may be remote) |
| 7.02 | Selection's Office | 2 | 1 | 120 /area | 120 | 1.40 | 168 | Private Office |
| 7.03 | Admin Assistant | 1 | 1 | 120 /area | 120 | 1.40 | 168 | Private Office |
| 7.04 | Human Resources (Future) | 1 | 1 | 120 /area | 120 | 1.40 | 168 | Adjacent to work room. Glass front reception counter with ADA customer station. Package delivery. |
| 7.05 | Reception | 1 | 1 | 100 /area | 100 | 1.40 | 140 | Product display case, waiting area. |
| 7.06 | Public Lobby | 2 | 1 | 100 /area | 100 | 1.40 | 140 | Product display case, waiting area. |
| 7.06 | Work Room | 0 | 1 | 150 /area | 150 | 1.40 | 210 | Shared work room for mail, copier, printers, product for sale storage. |
| 7.07 | Supply Storage | 0 | 1 | 50 /area | 50 | 1.40 | 70 | Supply storage. |
| 7.08 | Economic Development Director (Future) | 1 | 1 | 120 /area | 120 | 1.40 | 168 | Private office |
| 7.09 | Records Storage for Payrole | 0 | 1 | 50 /area | 50 | 1.40 | 70 | 5 file cabinets |
| TOTAL | | | | | 1,080 | | 1,582 | |
| 8.00 | Common Spaces | | | | | | | |
| 8.01 | Employee Break | | 1 | 200 /area | 200 | 1.40 | 280 | |
| 8.02 | Large Meeting Room | 60 | 1 | 20 /person | 1,200 | 1.40 | 1,680 | |
| 8.03 | Small Conference | 12 | 2 | 20 /person | 480 | 1.40 | 672 | One small conference near primary entry, one in administration. |
| 8.04 | Toilet Rooms | 8 | 4 | 20 /person | 640 | 1.40 | 896 | One ADA toilet per sex per floor, min. |
| TOTAL | | | | | 2,520 | | 3,528 | |

11

The Town of Exeter
 Draft Architectural Program
 December 19, 2005

| No. | Component | Persons/Units Per Area | Number of Areas | Space Requirement | NSF | Gross Factor | GSSF | Notes |
|---------------------------------|-------------------|---------------------------|--------------------|----------------------|-------|-----------------|--------|-------|
| 9.00 | Building Services | | | | | | | |
| 9.01 | Boiler | | 1 | 350/area | 350 | 1.40 | 490 | |
| 9.02 | Janitor Supply | | 1 | 100/area | 100 | 1.40 | 140 | |
| 9.03 | Tel/Com | | 1 | 80/area | 80 | 1.40 | 112 | |
| 9.04 | General Storage | | 1 | 400/area | 400 | 1.40 | 560 | |
| 9.05 | Janitor Closet | | 2 | 40/area | 80 | 1.40 | 112 | |
| 9.06 | Main Electrical | | 1 | 200/area | 200 | 1.40 | 280 | |
| 9.07 | Electrical | | 3 | 80/area | 240 | 1.40 | 336 | |
| | TOTAL | | | | 1,450 | | 2,030 | |
| TOWN HALL FUNCTIONAL AREA TOTAL | | | | | 9,006 | | 13,639 | |

| TOTALS BY FUNCTIONAL AREA | | | | | | | |
|----------------------------------|----------------------------|--|--|--|-------|--|--------|
| 1.00 | Town Clerk | | | | 2,016 | | 2,822 |
| 2.00 | Finance | | | | 160 | | 826 |
| 3.00 | Welfare | | | | 220 | | 554 |
| 4.00 | Information Technology | | | | 120 | | 280 |
| 5.00 | Town Assessor | | | | 360 | | 504 |
| 6.00 | Planning/ Code Enforcement | | | | 1,080 | | 1,512 |
| 7.00 | Administration | | | | 1,080 | | 1,582 |
| 8.00 | Common Spaces | | | | 2,520 | | 3,528 |
| 9.00 | Building Services | | | | 1,450 | | 2,030 |
| TOWN HALL FUNCTIONAL AREAS TOTAL | | | | | 9,006 | | 13,639 |
| Circulation Factor (x .15) | | | | | | | 2,046 |
| TOWN HALL TOTAL | | | | | | | 15,685 |

Rcd 2/8/08

EXETER TOWN OFFICE/TOWN HALL FACILITIES ASSESSMENT
7/21/06 rev. 7/31/06

TOWN OFFICE RENOVATION/EXPANSION
TOWN HALL RENOVATION

Concept-Level Cost Opinion based on Option D/D Alt. Dated 7/20/06

Town Office

Substantial renovation including:

- structural reinforcements
- installation of building-wide sprinkler system
- excavation of basement crawl space and construction of archival storage
- installation of new HVAC system and upgraded electrical and telecommunication systems
- foundation waterproofing and interior and exterior perimeter drainage systems
- code-related improvements such as fire-rated enclosure at existing main stairway

New addition at rear of existing building to include:

- fully-accessible and code-compliant public and staff restrooms
- new exit stair from Nowak Room and other second floor spaces
- new rear entrance vestibule

Cost Calculations

| | | |
|------------------------------------|-------------------------------|-------------|
| Basement, general renovation | 3712 square feet (sf) @ \$110 | \$ 408,300 |
| Basement, crawl space expansion | 1044 sf @ \$200 | \$ 208,800 |
| First and second floors renovation | 9628 sf @ \$140 | \$1,347,900 |
| New addition | 2626 sf @ \$165 | \$ 431,600 |

Total construction cost: \$2,396,600

Construction cost per square foot: \$141
(based on area of 17,010 sq. ft.)

| | |
|--|------------|
| Soft costs @ 23% | \$ 551,200 |
| Relocation costs @ \$300,000 | \$ 300,000 |
| 8 months inflation at 7% per annum, assumes spring '07 construction start, applied to construction cost only | \$ 110,200 |

Total other costs: \$ 961,400

Total project cost: \$3,358,000

Project cost per square foot: \$197

Town Hall

Work on Town Hall includes:

- renovation of ground floor to provide office space for Planning, Code Enforcement and Zoning
- renovation of existing restrooms
- accessibility improvements at ground level
- new HVAC, electrical and telecommunications systems at ground floor
- foundation waterproofing, regrading, and interior and exterior perimeter drainage systems
- structural repairs and reinforcement
- refurbishing of meeting rooms at upper floors (not including auditorium or gallery spaces)
- new fire-rated exit stair at rear of building
- exterior restoration as per previous Town CIP proposals
- budget may be sufficient to include ventilation of auditorium

Cost Calculations

| | | |
|---|-----------------|-------------|
| Ground floor renovation | 5754 sf @ \$150 | \$ 863,100 |
| Meeting rooms, 1 st and 2 nd floor | lump sum | \$ 50,000 |
| New rear stairway | lump sum | \$ 60,000 |
| Exterior restoration | lump sum | \$ 175,000 |
| Total construction cost: | | \$1,148,100 |
| Construction cost per square foot: | \$148 | |
| (based on affected area of 7760 sq. ft.) | | |
| Soft costs @ 23% | | \$ 264,100 |
| 8 months inflation at 7% per annum, assumes spring '07 construction | | \$ 53,600 |
| Total other costs: | | \$ 317,700 |
| Total project cost: | | \$1,465,800 |
| Project cost per square foot: | \$189 | |

Project Cost Summary

| | |
|---|-------------|
| Town Office Construction Cost: | \$2,396,600 |
| Town Hall Construction Cost: | \$1,148,100 |
| Subtotal Construction Cost: | \$3,544,700 |
| Construction cost per square foot: | \$143 |
| (based on total area of 24,750 sq. ft.) | |
| Town Office Other Costs: | \$ 961,400 |
| Town Hall Other Costs: | \$ 317,700 |
| Subtotal Other Costs: | \$1,279,100 |
| Town Office Project Cost: | \$3,358,000 |
| Town Hall Project Cost: | \$1,465,800 |
| Total Project Cost: | \$4,823,800 |
| Project cost per square foot: | \$195 |

Rcd 2/8/08

Exeter Town Office: Area Comparisons by Department
Town Office/Town Hall Project

July 20, 2006

| <u>Name of Department/Space</u> | <u>Exist.</u> | <u>Program</u> | <u>Option D</u> | <u>Option D Alt.</u> | <u>Comments</u> |
|---|---------------|----------------|-----------------|----------------------|-------------------------------|
| <i>I. Town Clerk</i> | | | | | |
| A. Clerks' Office | 243 | 608 | 840 | 840 | |
| B. Clerk's Customer Service Area | 160 | 240 | * | * | *included in A. |
| C. Clerk's Safe | 22 | 6 | 22 | 22 | |
| D. Vault and Storage | <u>421</u> | <u>600</u> | <u>583</u> | <u>583</u> | |
| Departmental total: | 851 | 1454 | 1445 | 1445 | |
| <i>II. Town Manager</i> | | | | | |
| A. Town Manager's Office | 148 | 200 | 352 | 352 | |
| B. Town Manager's Assistant/ Reception | 198 | 120 | 147 | 147 | |
| C. Human Resources/Assistant | | 120 | 217 | 217 | |
| D. Selectmens' Room | 344 | 120 | 308 | 308 | |
| E. Storage/Supplies | | 100 | 127 | 127 | |
| F. Workroom/Mail | <u>132</u> | <u>250</u> | <u>238</u> | <u>238</u> | doubles as conference room |
| Departmental total: | 822 | 1030 | 1389 | 1389 | |
| <i>III. Assessor</i> | | | | | |
| A. Assessor's Office | 162 | 160 | 154 | 169 | |
| B. Assessors' Work Area/Customer Service | <u>236</u> | <u>240</u> | <u>352</u> | <u>416</u> | |
| Departmental total: | 398 | 400 | 506 | 585 | |

| <u>Name of Department/Space</u> | <u>Exist.</u> | <u>Program</u> | <u>Option D</u> | <u>Option D Alt.</u> | <u>Comments</u> |
|---|---------------|----------------|-----------------|----------------------|------------------------|
| <i>IV. Finance/Tax</i> | | | | | |
| A. Finance/Tax Work Area | 182 | 230 | 352 | 416 | |
| B. Finance Director's Office | 170 | 160 | 196 | 196 | |
| C. Accountant's Office Finance/Tax | <u>344</u> | <u>120</u> | * | * | *included in work area |
| Departmental total: | 696 | 510 | 548 | 612 | |
| <i>V. Information Technology</i> | | | | | |
| A. I. T. Office/Workroom | <u>298</u> | <u>200</u> | <u>168</u> | <u>168</u> | |
| Departmental total: | 298 | 200 | 168 | 168 | |
| <i>VI. Welfare</i> | | | | | |
| A. Welfare Office | <u>344</u> | <u>316</u> | <u>352</u> | <u>352</u> | |
| Departmental total: | 344 | 316 | 352 | 352 | |
| <i>VII. Planning/Code Enforcement (located in Town Hall Ground Floor)</i> | | | | | |
| A. Planning Director's Office Office | 344 | 160 | 367 | 367 | |
| B. Planning/Code Enforcement Admin, Reception. & Waiting | 308 | 180 | 480 | 480 | |
| C. Code Enforcement Workroom, Office & Workstations | 396 | 400 | 514 | 514 | |
| D. Storage Room, Plans and Files | <u>104</u> | <u>380</u> | 355 | 355 | |
| E. Meeting Room | | | 160 | 160 | |
| F. Kitchenette | | | <u>65</u> | <u>65</u> | |
| Departmental total: | 1,152 | 1040 | 1941 | 1941 | |

Note: Area square footage figures are typically *net* square footage.

Board of Selectmen

AGENDA FACT SHEET for 7/31/06

Agenda Item: Town Office/Town Hall Project Presentation

Presenter(s): Russell Dean, Town Manager
Mac Collins, Architect, SMRT

1. BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED:

SMRT will be present to discuss options for the Town Hall/Town Office renovations. The cost estimates are preliminary; however, SMRT will go through next steps with the Board in order to refine the cost estimates. The Town Office/Town Hall working group met on July 27, 2006 and reviewed all options and discussed the preferred "Option D," which reflects a refinement of "Option 3" discussed by the Board on February 3, 2006.

2. VOTE REQUIRED BY BOARD OF SELECTMEN: [YES] NO (circle one)

Move the Board of Selectmen approve Option D as the Town Office/Town Hall project, and refer the project to the Technical Review Committee for further design.

3. BACK UP INFORMATION ATTACHED:

a. Option D Floorplan, Town Office/Town Hall.

SIGN OFF/APPROVAL REQUIRED:

| | | | | | |
|----|------------------|-----|------|----|-------|
| a. | Town Manager | yes | (no) | NA | _____ |
| b. | Town Counsel | yes | (no) | NA | _____ |
| c. | Finance Director | yes | (no) | NA | _____ |
| d. | _____ | yes | no | NA | _____ |

Disposition by BOS

Action taken: _____ **Present on future Agenda:** _____

Refer to/Inform: _____ **Report back to BOS on:** _____

EXETER TOWN OFFICE/TOWN HALL FACILITIES ASSESSMENT
7/21/06

TOWN OFFICE RENOVATION/EXPANSION
TOWN HALL RENOVATION

Concept-Level Cost Opinion based on Option D/D Alt. Dated 7/20/06

Town Office

Substantial renovation including:

- structural reinforcements
- installation of building-wide sprinkler system
- excavation of basement crawl space and construction of archival storage
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- code-related improvements such as fire-rated enclosure at existing main stairway

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- new exit stair from Nowak Room and other second floor spaces
- new rear entrance vestibule

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|--|-------------------------------|-------------|
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| Soft costs @ 23% | | \$ 551,200 |
| Relocation costs @ \$300,000 | | \$ 300,000 |
| 8 months inflation at 7% per annum, assumes spring '07 construction start, applied to construction cost only | | \$ 110,200 |
| Total other costs: | | \$ 961,400 |
| Total project cost: | | \$3,358,000 |

Town Hall

Work on Town Hall includes:

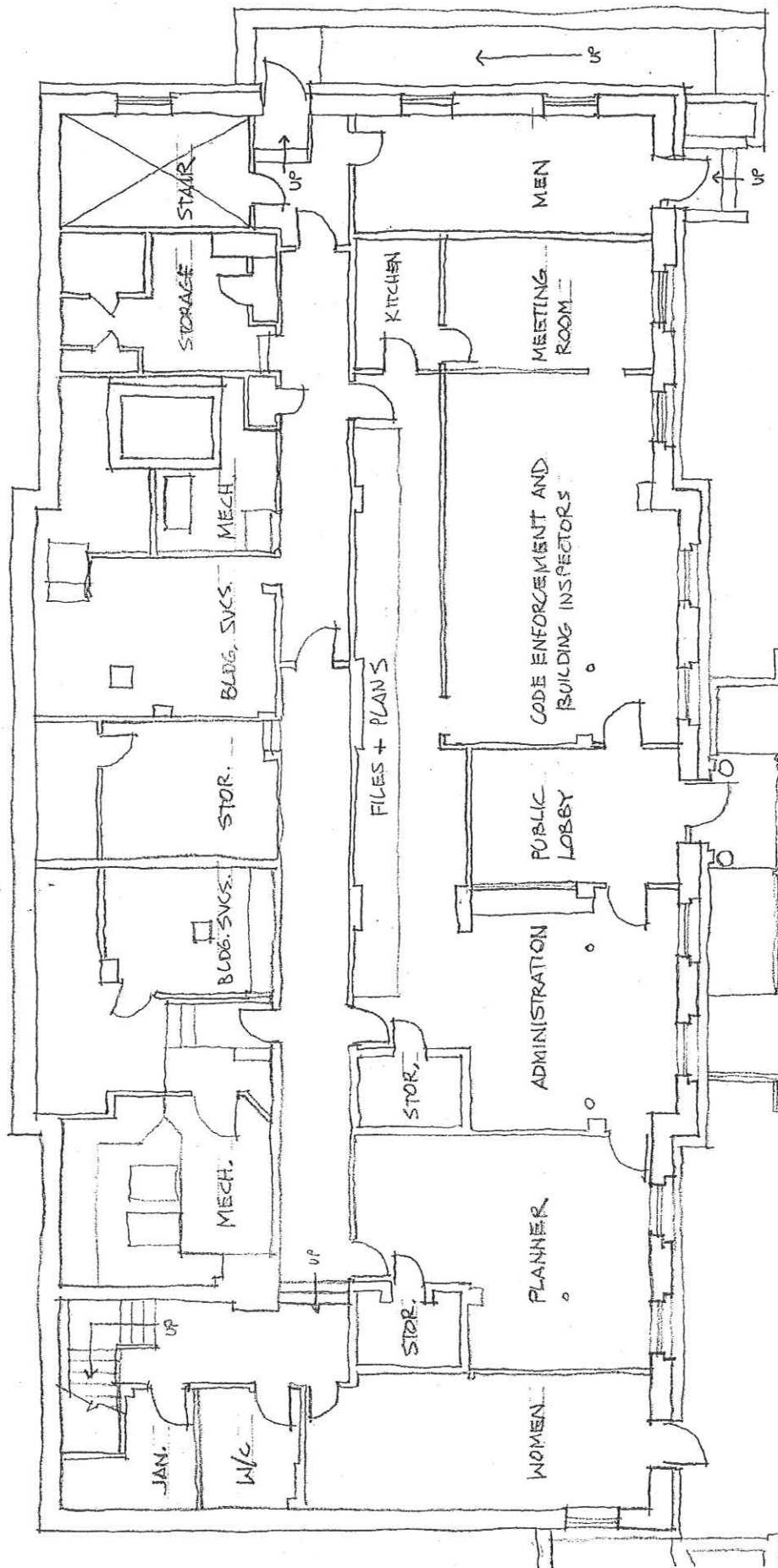
- renovation of ground floor to provide office space for Planning, Code Enforcement and Zoning
- renovation of existing restrooms
- accessibility improvements at ground level
- new HVAC, electrical and telecommunications systems
- foundation waterproofing, regarding, and interior and exterior perimeter drainage systems
- structural repairs and reinforcement
- refurbishing of meeting rooms at upper floors
- new fire-rated exit stair at rear of building
- exterior restoration as per previous Town CIP proposals
- budget may be sufficient to include ventilation of auditorium

Cost Calculations

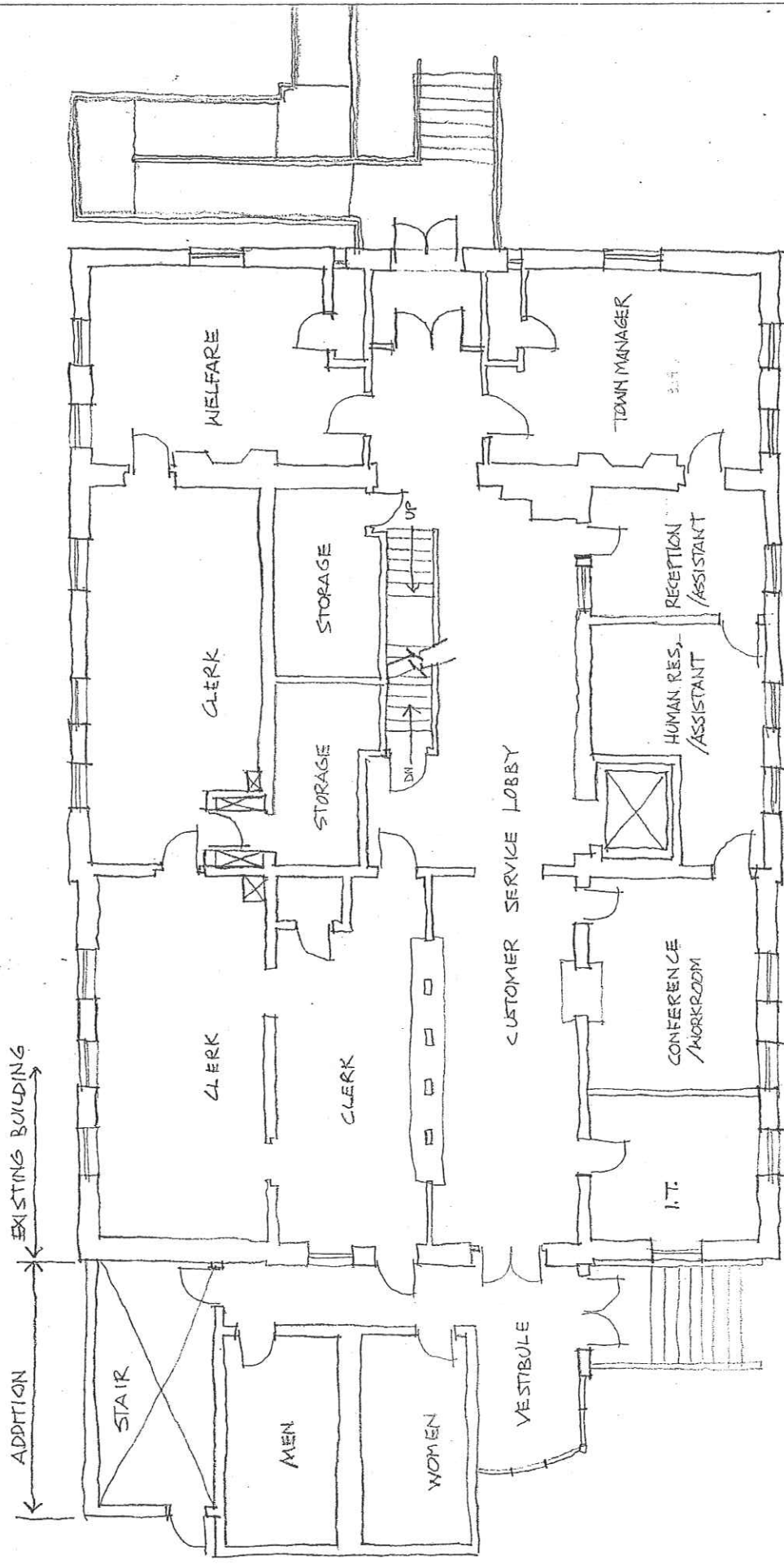
| | | |
|---|-----------------|-------------|
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Project Cost Summary

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|--------------------------------|-------------|
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| Subtotal Other Costs: | \$1,279,100 |
| Town Office Project Cost: | \$3,358,000 |
| Town Hall Project Cost: | \$1,465,800 |
| Total Project Cost: | \$4,823,800 |



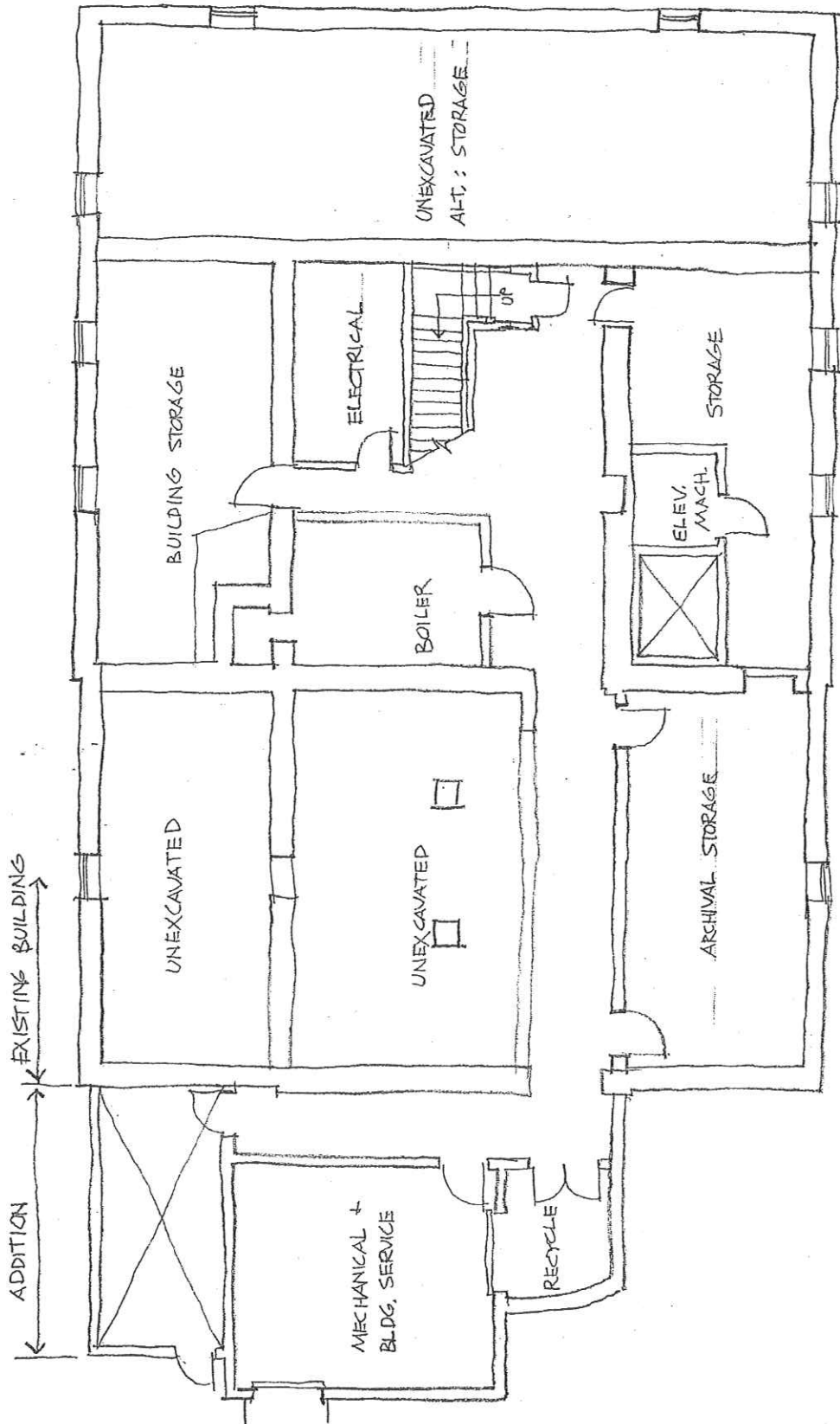
EXETER TOWN HALL
 GROUND FLOOR OPTION D
 1/8" = 1'-0"
 7/20/06



EXETER TOWN OFFICE
 FIRST FLOOR OPTION D
 1/8" = 1'-0"
 7/20/06

252
 251

252

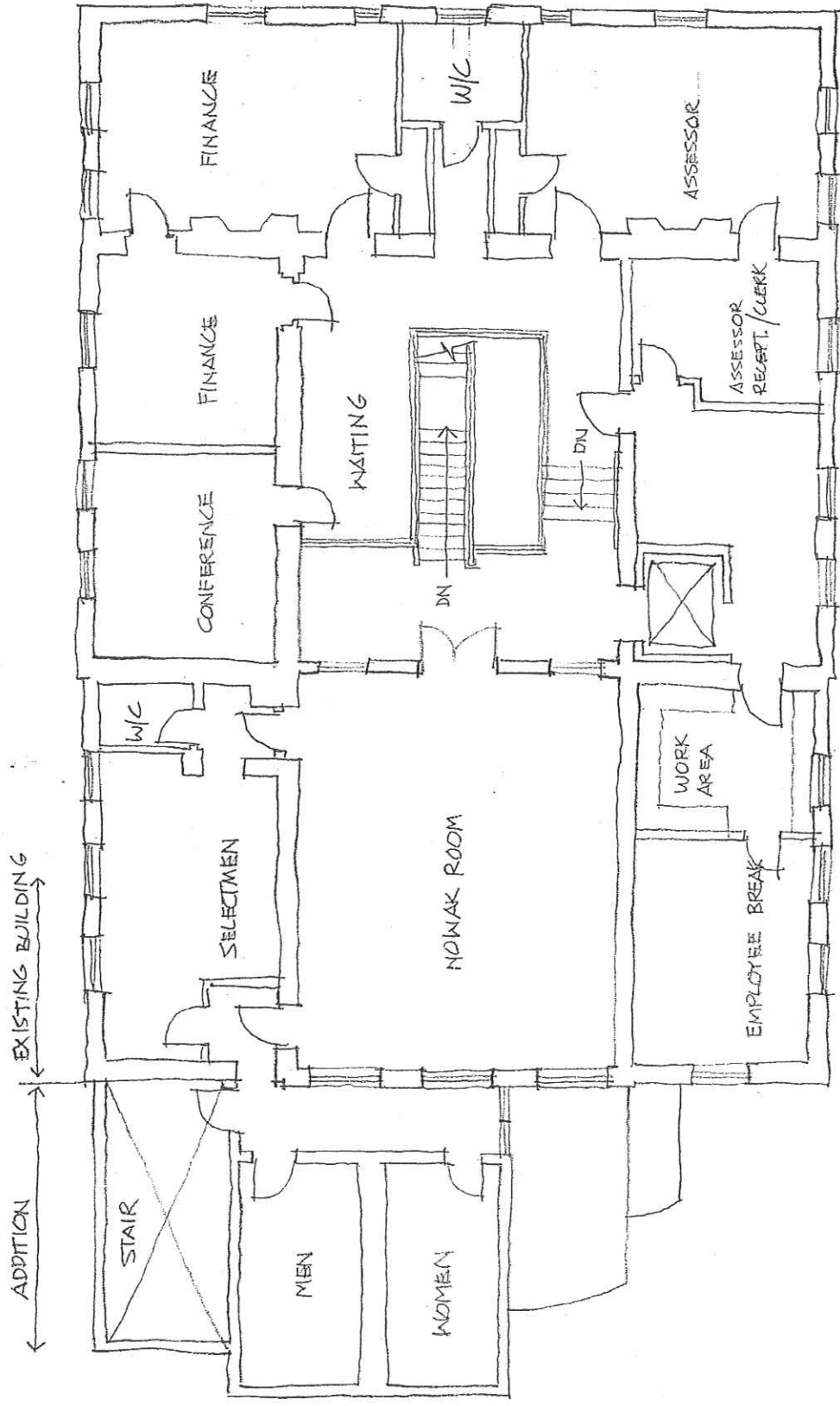


EXETER TOWN OFFICE

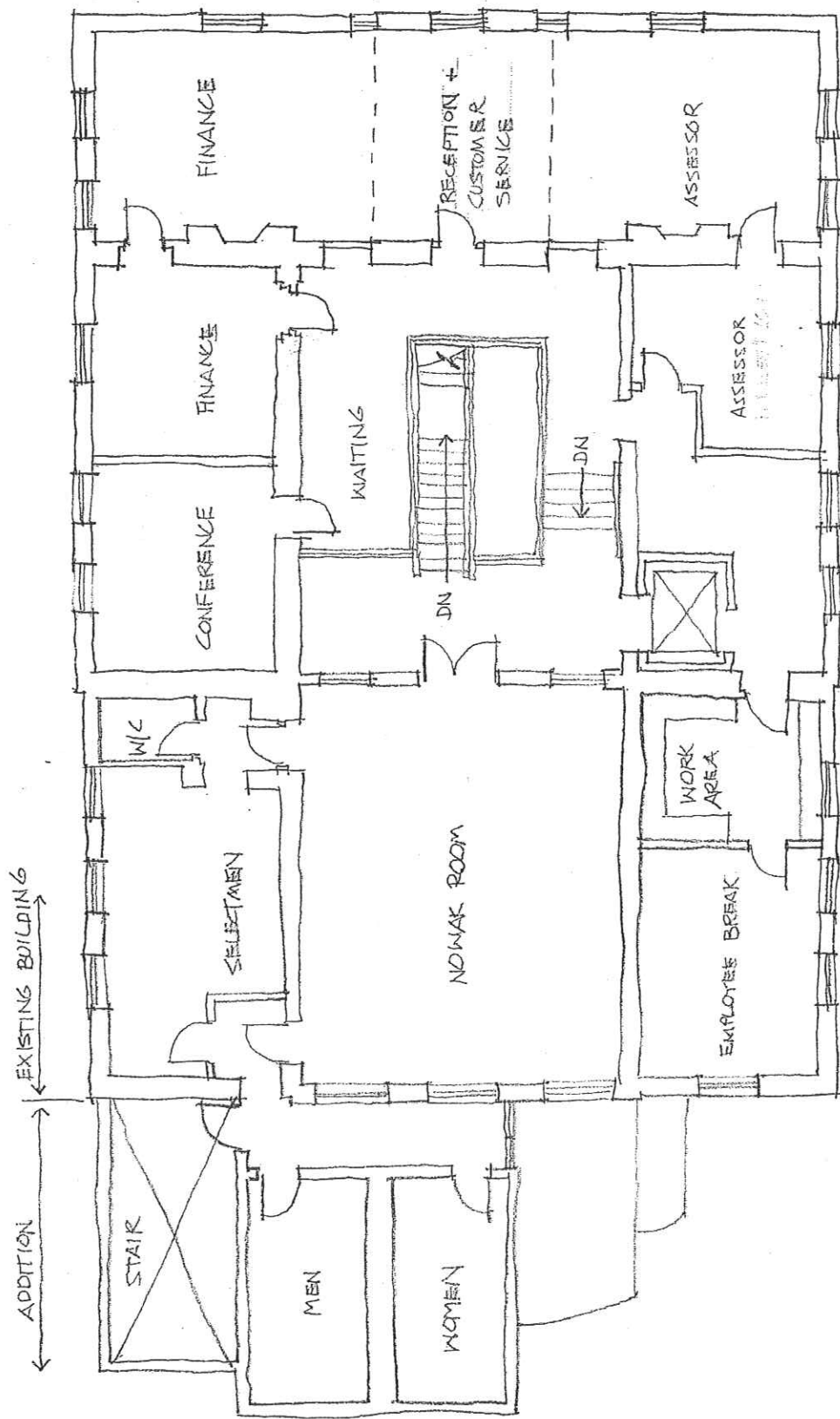
BASEMENT OPTION D

7/20/06

1/8" = 1'-0"



EXETER TOWN OFFICE
 SECOND FLOOR OPTION D
 1/8" = 1'-0"
 7/20/06



EXETER TOWN OFFICE
 SECOND FLOOR OPTION D CALT
 1/11/11 - 011
 7/20/06

PROJECT COSTS

Public institutions typically add 20% to as much as 33% of Construction Cost as Soft Costs to arrive at Project Cost.

I. Construction Costs

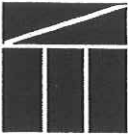
- A. construction and built-in equipment
- B. site construction (grading, landscape, site utilities)
- C. offsite construction (utilities)
- D. environmental mitigation
- E. hazardous material abatement
- F. miscellaneous pre-construction services
- G. contingencies
 - i. design contingency @ 10% of construction cost
 - ii. construction/bidding contingency @ 10% of construction cost
 - iii. escalation reserve @ 7% of construction cost

II. Soft Costs – Fees and Services

- A. architect/engineer fee – contract documents
- B. architect/engineer fee – existing conditions
- C. architect/engineer fee – reimbursables
- D. consultant fee
- E. consultant fee – reimbursables
- F. estimating and printing
- G. boundary and topographical survey
- H. geotechnical investigation
- I. materials testing
- J. life cycle cost analysis
- K. regulatory approvals and permits
- L. clerk of the works
- M. owner's representative
- N. special inspections
- O. balancing and building commissioning
- P. miscellaneous fees
- Q. fees and services contingency @ 5% of II.A – II.P

III. Soft Costs – Owners Costs/Administrative Costs

- A. land
- B. fixtures, furnishings and movable equipment (FF&E)
- C. technology (6% of construction and built-in equipment only)
- D. insurance/legal
- E. project insurance
- F. relocation (moving, storage, rental, utilities, temporary furniture and equipment)
- G. waste removal
- H. utility fees
- I. owner construction management
- J. temporary facilities
- K. signage and plaques
- L. advertising and printing
- M. percent for art



Project Request

Date Submitted: 7/28/2006

Year Funding is Requested: 2007

Department: Town Manager
 Project Title: Town Hall/Town Office Renovations
 Contact: Russ Dean
 Phone: 778 - 0591 ext. 101
 E-mail: rdean@exeternh.org

Priority (1 of 8, etc.): 1 of 1
 Estimated Cost Total: \$4,823,800
 Estimated Useful Life (Years): 30
 Previously Presented? (Yes/No): No
 When (Please give year): N/A

Request Results from ("√" all that apply)

- Citizens Request
- Reduce Long Term Operating Cost
- Health or Safety
- Continuation of Existing Project
- Expanded Public Demand
- Reflects Master Plan
- Reduces Liability
- Studies/Other

Purposed ("√" all that apply)

- Building Renovation/Upgrade
- Building Addition/New Construction
- Real Property Acquisition
- Sewer System Improvements
- Equipment New
- Equipment Replacement
- Road Improvements
- Water System Improvements

Description and Justification: (Include any Additional Operating Cost as a result of project)

The Town has been working to finalize a proposal for a complete renovation to the Town Office building, supplemented by a complete renovation of the Lower Level of the Town Hall. SMRT of Portland, ME, has been working with the Town since 2005 on the project. Initial concepts were presented to the Board of Selectmen on February 3, 2006. It was determined after an exploration of various alternatives that a complete renovation of the Town Office and the lower level of Town Hall was favored. This is being recommended in order to preserve town services as part of the downtown environment, while making substantial improvements to two of the Town's most historic structures. This renovation contemplates the following: for the Town Office: structural reinforcements, installation of a building-wide sprinkler system, excavation of the basement crawl space and construction of archival storage space, installation of a new HVAC system including a complete electrical and telecommunications systems upgrade, foundation waterproofing and interior and exterior perimeter drain systems, and code-related improvements such as a fire-rated enclosure at the existing main stairway. There is also a new addition contemplated for the rear of the Town office, which will include fully-accessible and code compliant public and staff restrooms, a new exit stair from the Nowak Room, and a new rear entrance vestibule. The total construction cost of this portion of the project is estimated at \$2,396,600. The total estimate of \$3,358,000 includes \$551,200 for "soft costs," \$300,000 for relocation, and \$110,200 in inflation expense, presuming spring '07 construction. The Town Hall portion of the project includes: renovation of the ground floor to provide office space for Planning, Code Enforcement, and Zoning functions; renovation of the existing restrooms, accessibility improvements at ground level, new HVAC, electrical and telecommunications systems, foundation waterproofing, regrading, and interior and exterior perimeter drainage systems, structural repairs and reinforcement, refurbishment of meeting rooms on the upper floors, a new fire-rated stair at the rear of the building, exterior restoration and anticipated ventilation of the auditorium space. Total construction cost for this portion of the project is estimated at \$1,148,100, with \$264,100 in "soft costs" and \$53,600 in inflation assuming spring '07 construction, for a total of \$1,465,800. The total project cost for both buildings is estimated at \$4,823,800. These costs will be further refined as the design stages of the project progress.

| Capital Costs: | Prior | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------------------------|---------|-----------|------|------|------|------|------|
| Planning/Design/Engineering | 100,000 | 815,300 | | | | | |
| Land/Site Improvements | | | | | | | |
| Construction | | 3,544,700 | | | | | |
| Equipment Cost | | | | | | | |
| Other Costs | | 463,800 | | | | | |
| Totals | 100,000 | 4,823,800 | | | | | |

| Operating Costs: | Prior | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---------------------|-------|------|------|------|------|------|------|
| Salaries/Wages | | | | | | | |
| Fringe Benefits | | | | | | | |
| Contracted Services | | | | | | | |
| Expenses | | | | | | | |
| Other Costs | | | | | | | |
| Totals | | | | | | | |

Proposed Funding Source ("√" all that apply)

- General Fund (tax rate)
- Water Fund (user fees)
- Impact Fee Account
- Other (Grants, Special Assessment)
- Sewer Fund (user fees)
- Capital Reserve Fund



Project Request

Date Submitted: 7/28/2006

Year Funding is Requested: 2007

Department: Town Manager
Project Title: Town Hall/Town Office Renovations
Contact: Russ Dean
Phone: 778 - 0591 ext. 101
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Estimated Useful Life (Years): 30
Previously Presented? (Yes/No): No
When (Please give year): N/A

Request Results from ("√" all that apply)

- Citizens Request, Reduce Long Term Operating Cost, Health or Safety, Continuation of Existing Project, Expanded Public Demand, Reflects Master Plan, Reduces Liability, Studies/Other

Purposed ("√" all that apply)

- Building Renovation/Upgrade, Building Addition/New Construction, Real Property Acquisition, Sewer System Improvements, Equipment New, Equipment Replacement, Road Improvements, Water System Improvements

Description and Justification: (Include any Additional Operating Cost as a result of project)

The Town has been working to finalize a proposal for a complete renovation to the Town Office building, supplemented by a complete renovation of the Lower Level of the Town Hall. SMRT of Portland, ME, has been working with the Town since 2005 on the project. Initial concepts were presented to the Board of Selectmen on February 3, 2006. It was determined after an exploration of various alternatives that a complete renovation of the Town Office and the lower level of Town Hall was favored. This is being recommended in order to preserve town services as part of the downtown environment, while making substantial improvements to two of the Town's most historic structures. This renovation contemplates the following: for the Town Office: structural reinforcements, installation of a building-wide sprinkler system, excavation of the basement crawl space and construction of archival storage space, installation of a new HVAC system including a complete electrical and telecommunications systems upgrade, foundation waterproofing and interior and exterior perimeter drain systems, and code-related improvements such as a fire-rated enclosure at the existing main stairway. There is also a new addition contemplated for the rear of the Town office, which will include fully-accessible and code compliant public and staff restrooms, a new exit stair from the Nowak Room, and a new rear entrance vestibule. The total construction cost of this portion of the project is estimated at \$2,396,600. The total estimate of \$3,358,000 includes \$551,200 for "soft costs," \$300,000 for relocation, and \$110,200 in inflation expense, presuming spring '07 construction. The Town Hall portion of the project includes: renovation of the ground floor to provide office space for Planning, Code Enforcement, and Zoning functions; renovation of the existing restrooms, accessibility improvements at ground level, new HVAC, electrical and telecommunications systems, foundation waterproofing, regrading, and interior and exterior perimeter drainage systems, structural repairs and reinforcement, refurbishment of meeting rooms on the upper floors, a new fire-rated stair at the rear of the building, exterior restoration and anticipated ventilation of the auditorium space. Total construction cost for this portion of the project is estimated at \$1,148,100, with \$264,100 in "soft costs" and \$53,600 in inflation assuming spring '07 construction, for a total of \$1,465,800. The total project cost for both buildings is estimated at \$4,823,800. These costs will be further refined as the design stages of the project progress.

Table with 8 columns: Capital Costs, Prior, 2007, 2008, 2009, 2010, 2011, 2012. Rows include Planning/Design/Engineering, Land/Site Improvements, Construction, Equipment Cost, Other Costs, and Totals.

Table with 8 columns: Operating Costs, Prior, 2007, 2008, 2009, 2010, 2011, 2012. Rows include Salaries/Wages, Fringe Benefits, Contracted Services, Expenses, Other Costs, and Totals.

Proposed Funding Source ("√" all that apply)

- General Fund (tax rate), Water Fund (user fees), Impact Fee Account, Other (Grants, Special Assessment), Sewer Fund (user fees), Capital Reserve Fund

PROJECT COSTS

Public institutions typically add 20% to as much as 33% of Construction Cost as Soft Costs to arrive at Project Cost.

I. Construction Costs

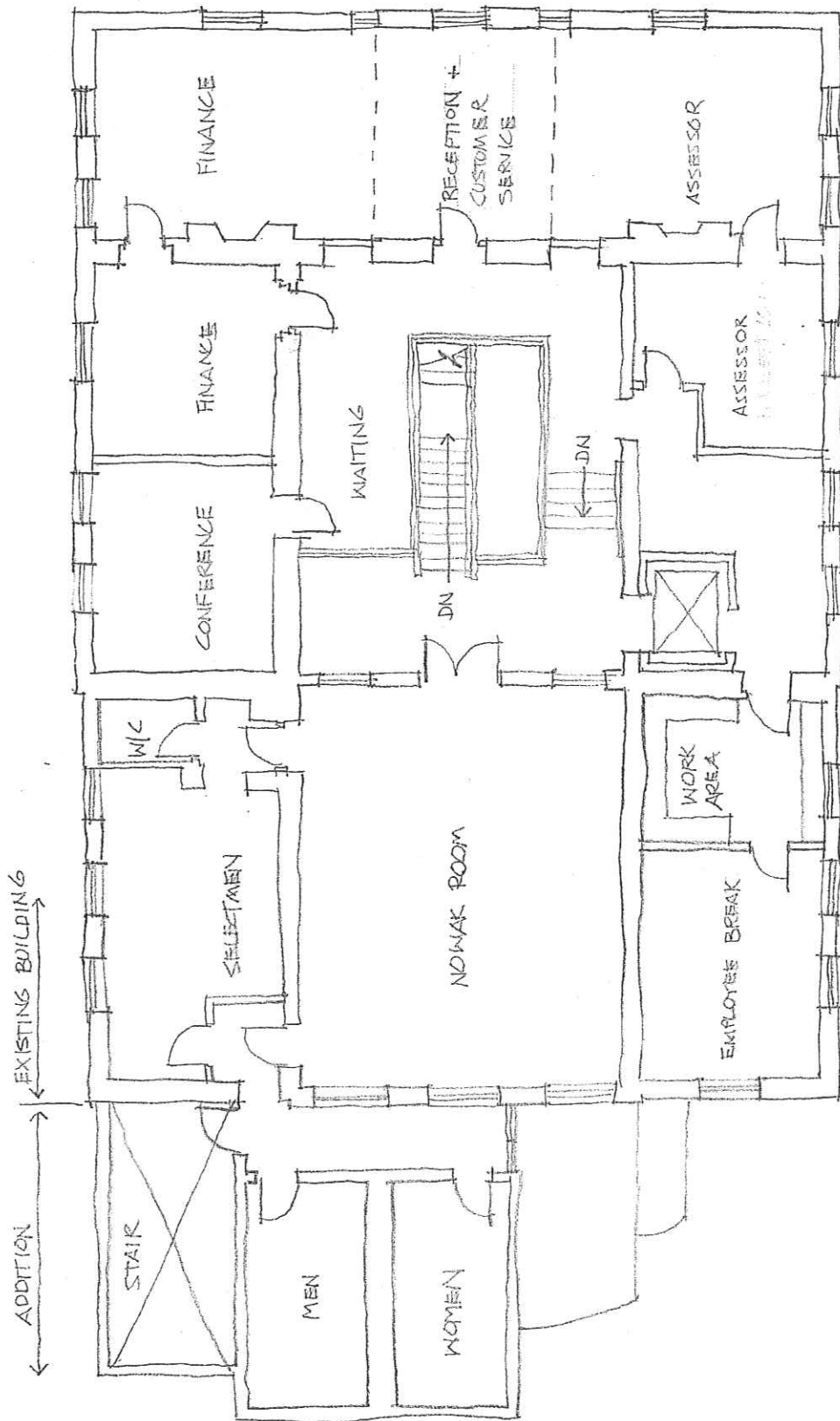
- A. construction and built-in equipment
- B. site construction (grading, landscape, site utilities)
- C. offsite construction (utilities)
- D. environmental mitigation
- E. hazardous material abatement
- F. miscellaneous pre-construction services
- G. contingencies
 - i. design contingency @ 10% of construction cost
 - ii. construction/bidding contingency @ 10% of construction cost
 - iii. escalation reserve @ 7% of construction cost

II. Soft Costs – Fees and Services

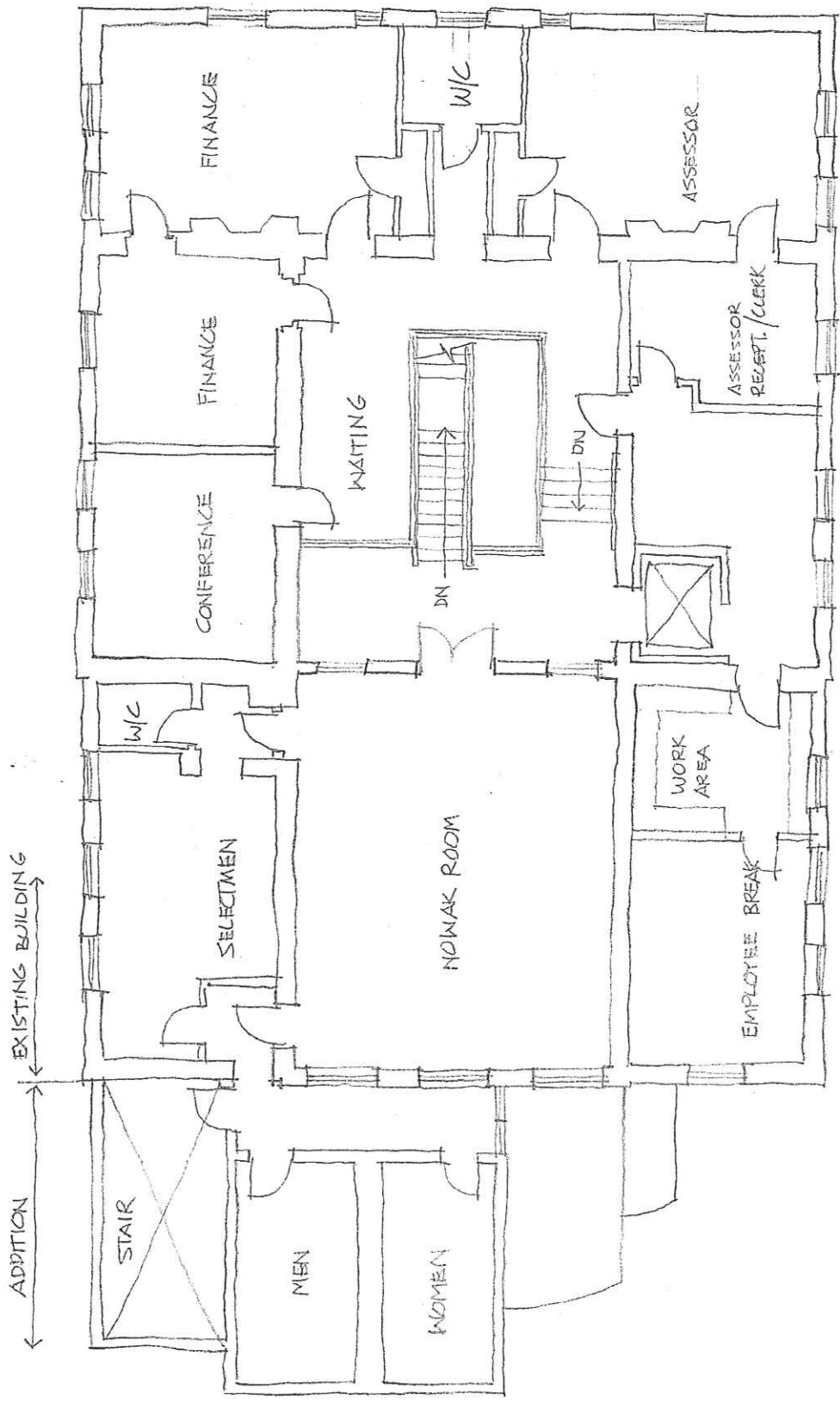
- A. architect/engineer fee – contract documents
- B. architect/engineer fee – existing conditions
- C. architect/engineer fee – reimbursables
- D. consultant fee
- E. consultant fee – reimbursables
- F. estimating and printing
- G. boundary and topographical survey
- H. geotechnical investigation
- I. materials testing
- J. life cycle cost analysis
- K. regulatory approvals and permits
- L. clerk of the works
- M. owner's representative
- N. special inspections
- O. balancing and building commissioning
- P. miscellaneous fees
- Q. fees and services contingency @ 5% of II.A – II.P

III. Soft Costs – Owners Costs/Administrative Costs

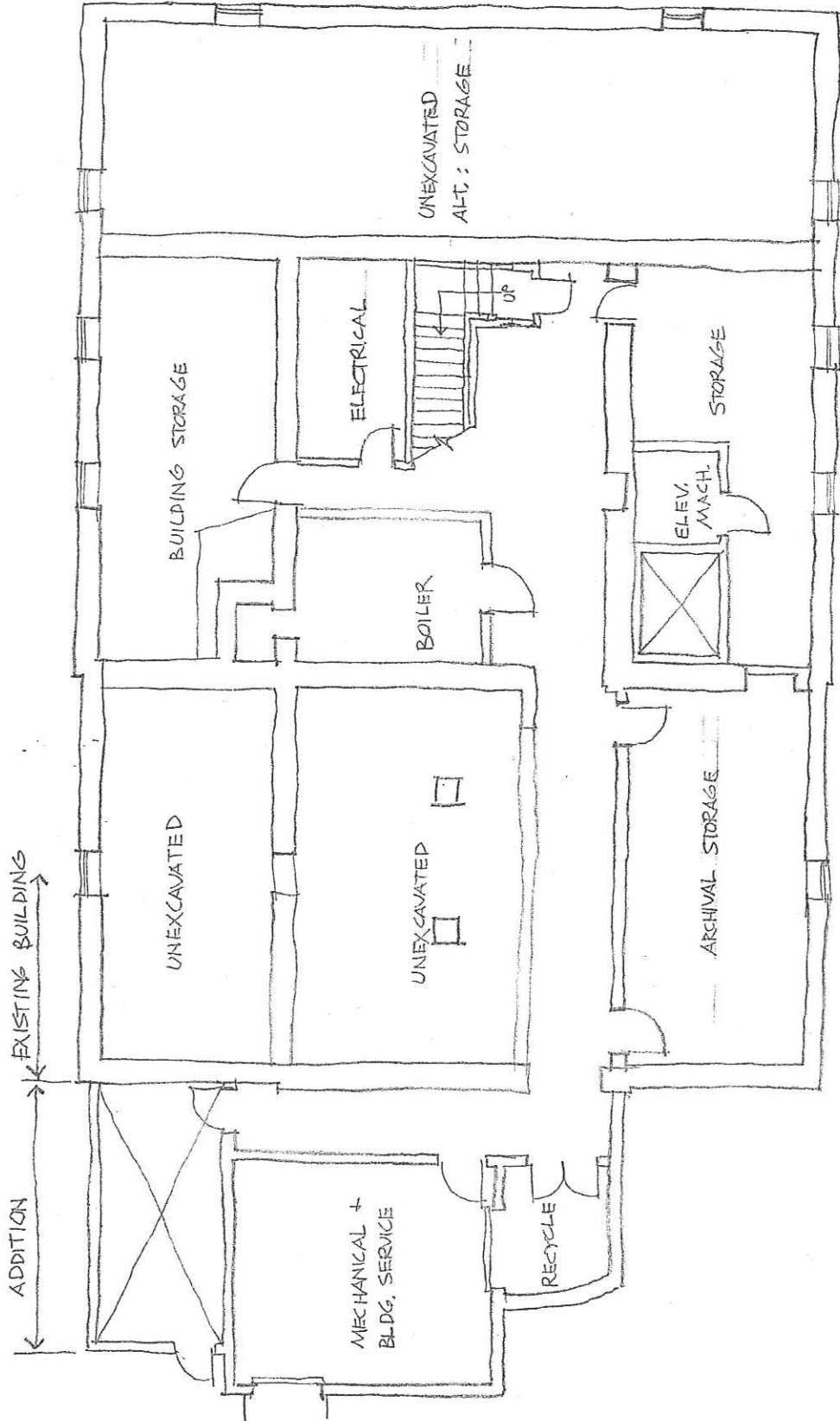
- A. land
- B. fixtures, furnishings and movable equipment (FF&E)
- C. technology (6% of construction and built-in equipment only)
- D. insurance/legal
- E. project insurance
- F. relocation (moving, storage, rental, utilities, temporary furniture and equipment)
- G. waste removal
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EXETER TOWN OFFICE
 SECOND FLOOR OPTION D CALT
 1/8 11-11-06
 7/20/06



EXETER TOWN OFFICE
 SECOND FLOOR OPTION D
 1/8" = 1'-0"
 7/20/06

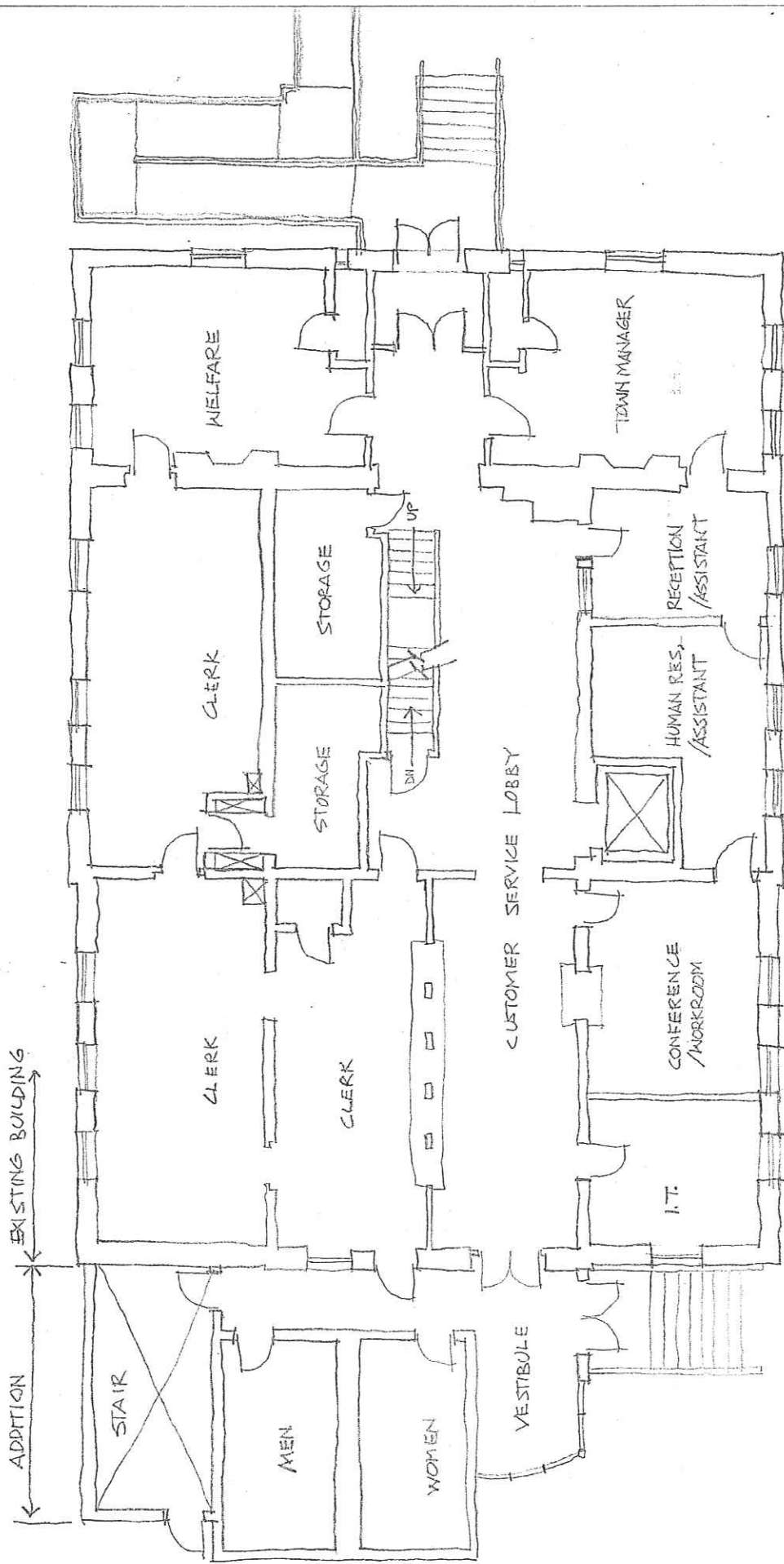


EXETER TOWN OFFICE

BASEMENT OPTION D

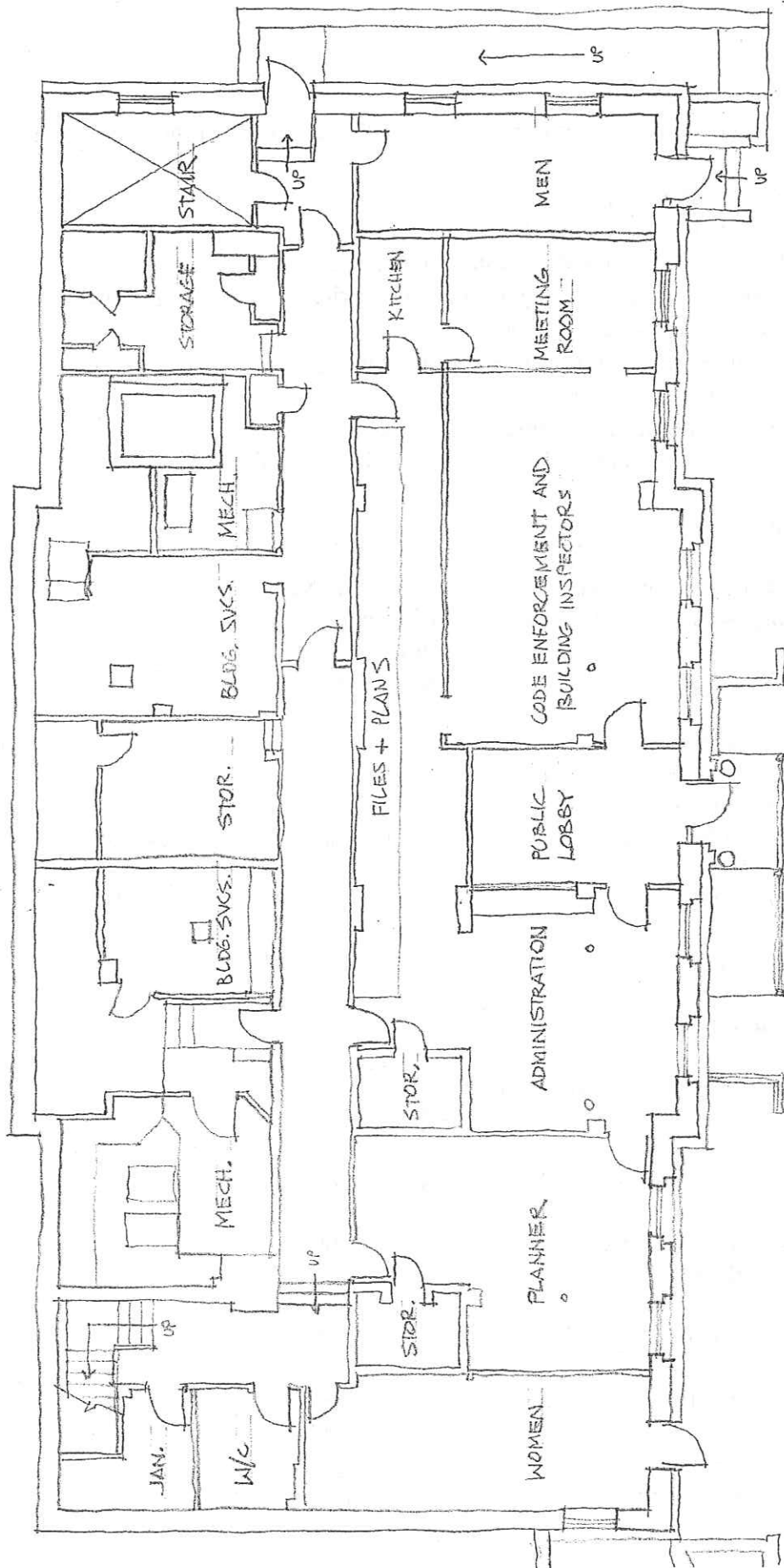
7/20/06

1/8" = 1'-0"



EXETER TOWN OFFICE
 FIRST FLOOR OPTION D
 1/8" = 1'-0"
 7/20/06

20'0"
 9'7"
 23'2"



EXETER TOWN HALL
 GROUND FLOOR OPTION D
 1/8" = 1'-0"
 7/20/06

Town Hall

Work on Town Hall includes:

- renovation of ground floor to provide office space for Planning, Code Enforcement and Zoning
- renovation of existing restrooms
- accessibility improvements at ground level
- new HVAC, electrical and telecommunications systems
- foundation waterproofing, regarding, and interior and exterior perimeter drainage systems
- structural repairs and reinforcement
- refurbishing of meeting rooms at upper floors
- new fire-rated exit stair at rear of building
- exterior restoration as per previous Town CIP proposals
- budget may be sufficient to include ventilation of auditorium

Cost Calculations

| | | |
|---|-----------------|-------------|
| Ground floor renovation | 5754 sf @ \$150 | \$ 863,100 |
| Meeting rooms, 1 st and 2 nd floor | lump sum | \$ 50,000 |
| New rear stairway | lump sum | \$ 60,000 |
| Exterior restoration | lump sum | \$ 175,000 |
| Total construction cost: | | \$1,148,100 |
| Soft costs @ 23% | | \$ 264,100 |
| 8 months inflation at 7% per annum, assumes spring '07 construction | | \$ 53,600 |
| Total other costs: | | \$ 317,700 |
| Total project cost: | | \$1,465,800 |

Project Cost Summary

| | |
|--------------------------------|-------------|
| Town Office Construction Cost: | \$2,396,600 |
| Town Hall Construction Cost: | \$1,148,100 |
| Subtotal Construction Cost: | \$3,544,700 |
| Town Office Other Costs: | \$ 961,400 |
| Town Hall Other Costs: | \$ 317,700 |
| Subtotal Other Costs: | \$1,279,100 |
| Town Office Project Cost: | \$3,358,000 |
| Town Hall Project Cost: | \$1,465,800 |
| Total Project Cost: | \$4,823,800 |

EXETER TOWN OFFICE/TOWN HALL FACILITIES ASSESSMENT
7/21/06

TOWN OFFICE RENOVATION/EXPANSION
TOWN HALL RENOVATION

Concept-Level Cost Opinion based on Option D/D Alt. Dated 7/20/06

Town Office

Substantial renovation including:

- structural reinforcements
- installation of building-wide sprinkler system
- excavation of basement crawl space and construction of archival storage
- installation of new HVAC system and upgraded electrical and telecommunication systems
- foundation waterproofing and interior and exterior perimeter drainage systems
- code-related improvements such as fire-rated enclosure at existing main stairway

New addition at rear of existing building to include:

- fully-accessible and code-compliant public and staff restrooms
- new exit stair from Nowak Room and other second floor spaces
- new rear entrance vestibule

Cost Calculations

| | | |
|--|-------------------------------|-------------|
| Basement, general renovation | 3712 square feet (sf) @ \$110 | \$ 408,300 |
| Basement, crawl space expansion | 1044 sf @ \$200 | \$ 208,800 |
| First and second floors renovation | 9628 sf @ \$140 | \$1,347,900 |
| New addition | 2626 sf @ \$165 | \$ 431,600 |
| Total construction cost: | | \$2,396,600 |
| Soft costs @ 23% | | \$ 551,200 |
| Relocation costs @ \$300,000 | | \$ 300,000 |
| 8 months inflation at 7% per annum, assumes spring '07 construction start, applied to construction cost only | | \$ 110,200 |
| Total other costs: | | \$ 961,400 |
| Total project cost: | | \$3,358,000 |

Board of Selectmen

AGENDA FACT SHEET for 7/31/06

Agenda Item: Town Office/Town Hall Project Presentation

Presenter(s): Russell Dean, Town Manager
Mac Collins, Architect, SMRT

1. BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED:

SMRT will be present to discuss options for the Town Hall/Town Office renovations. The cost estimates are preliminary; however, SMRT will go through next steps with the Board in order to refine the cost estimates. The Town Office/Town Hall working group met on July 27, 2006 and reviewed all options and discussed the preferred "Option D," which reflects a refinement of "Option 3" discussed by the Board on February 3, 2006.

2. VOTE REQUIRED BY BOARD OF SELECTMEN: [YES] NO (circle one)

Move the Board of Selectmen approve Option D as the Town Office/Town Hall project, and refer the project to the Technical Review Committee for further design.

3. BACK UP INFORMATION ATTACHED:

- a. Option D Floorplan, Town Office/Town Hall.

SIGN OFF/APPROVAL REQUIRED:

| | | | | | |
|----|------------------|-----|------|----|-------|
| a. | Town Manager | yes | (no) | NA | _____ |
| b. | Town Counsel | yes | (no) | NA | _____ |
| c. | Finance Director | yes | (no) | NA | _____ |
| d. | _____ | yes | no | NA | _____ |

Disposition by BOS

Action taken: _____ Present on future Agenda: _____

Refer to/Inform: _____ Report back to BOS on: _____
