

May 1, 1999

# TOWN HALL SOUTH AKA THE POLICE HEADQUARTERS

### SITE

The Town Hall South is located at the intersection of State Route 25 and 302. Existing uses neighboring the facility are commercial residential. Access into the site exists from both State Route 25 at two locations and Route 302. The southern access point along route 25 conflicts with the traffic volume generated by the traffic signal associated with the route 25 and route 302 intersection.

Parking for the facility is located at two areas. Seventeen spaces service the first floor entrance and twenty-five spaces service the lower entrance. Site lighting and paving conditions are poor.

Handicap accesses to the building are from both entrances that service each floor. Handicap parking for the facility consists of three spaces, two servicing the first floor and one servicing the lower floor. Handicap parking servicing the first level is improperly located across the path of vehicular traffic. The quantity of spaces is sufficient for the total number of spaces.

Expansion of the building and the parking are limited do to the topography and wetlands. Some expansion for the building is possible if the exterior deck is removed. Parking expansion is not feasible since wetlands are immediately adjacent to the west.

#### Recommendations

- Replace deteriorated bituminous pavement, curbing, and walks.
- Reorient upper parking.



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### STRUCTURAL

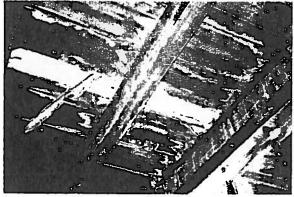
### Existing Structure

Town Hall South is a two-story structure with a grade level entrance on the west side for the Lower Level and the east side for the Main Level. The building is constructed of structural steel wide flange beams and columns. The Main Level Floor is a reinforced concrete slab on painted metal deck, which spans between the steel beams and also between the east foundation wall and the adjacent steel beams. The roof deck that spans between the steel beams is Type "B" galvanized metal roof deck.

The foundations include story high walls on the east and north sides of the building, a frost wall on the west side and a combination retaining wall and frost wall on the south side. The first floor slab is supported by the foundation walls on the east and north sides. Footings supporting the columns and walls were concealed below the slab-on-grade on the interior of the Lower Level and by the grade on the outside. Therefore, the sizes and locations could not be confirmed.

There is an unused reinforced concrete Parking deck adjacent to the south end of the Main Floor Level. A portion of the underside of the deck is enclosed on the Lower Level but there is an outside Storage Area under the remainder of the deck. The surface of the deck is exposed to the elements.

Existing Conditions



The most noticeable condition is located at the Parking Deck. The concrete deck is exhibiting signs of delamination (separation) of the concrete slab. The metal deck supporting the concrete slab is severely corroded, and portions of it are falling down. In addition, there is serious rusting of the steel beams and columns, which support the deck. At many locations, the connections have been affected by the corrosion, and delamination of the beam flanges is occurring.

There is considerable intrusion of ground and surface water into the basement level. Many of the interior

partitions and the flooring have been exposed to water over prolonged periods.

#### Recommendations

The Parking Deck structure must not be used under any circumstances, including the space below on the Basement Level. This portion of the building must be removed because of the extent of deterioration to the structure

The path of the water intrusion should be determined. The foundations should be closely inspected to verify that undermining of the footings and slab-on-grade have not occurred.



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## Summary

Town Hall South is reasonably structurally sound with the exception of the Parking Deck structure. The recommendations developed from this evaluation were based only on the portions of the structure that were exposed to view. Destructive investigations were not performed in order to view the foundations, walls or roof structure. The areas, which are totally or partially concealed by finishes, were not viewed. Considering the exposed areas, it is not recommended that additional exploration occur except as noted in this report.



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### **ARCHITECTURAL**

This building was originally constructed and inhabited by a farm equipment dealer. It has approximately 20,000 square feet of area, which includes two floors. It also includes an area that is essentially an exterior elevated parking garage, which formerly housed the farm equipment. The lower level was apparently offices utilized by others.

The building construction type is uncertain since a mixture of noncombustible and combustibles are used. Under the current codes, it probably would not qualify for any higher classification than a 5A.

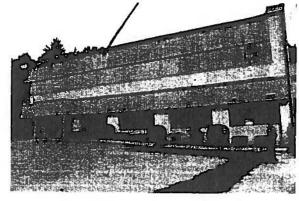
The date of construction is unclear. The exterior cladding is texture 1-11, which would date it to the mid-1970's.

#### Exterior Walls

The exterior walls of the upper area appear to be nonbearing steel stud. The exterior cladding is texture 1-11 and the interior cladding is painted gypsum board. It appears to be in good condition. No failures were noted and the estimated remaining useful life is 30 years. There is no recommendation except to note that this material does require a high degree of maintenance.

The exterior walls of the lower section are nonbearing steel stud and concrete foundation walls, which are furred out on the interior and clad in a painted gypsum board. In the lower level, the exterior texture 1-11 has demonstrated some difficulties from constant moisture. Rotting does appear. The concrete foundation wall has cracks on the eastern side where the entire floor is undergrade. The access to the building is on this side is on the upper level.

The estimated remaining useful life of these systems would be 15 years for the stud wall, which is



experiencing some stress from moisture, and 30 years for the concrete wall. Recommendations include repair of the rot and patching of the cracks, since they may well be a source of water leaks.

### **Exterior Windows**

The exterior windows are a mixture of single hung and slider windows. They were manufactured by Acorn, Inc., and the name of this model is A-Therm. These inexpensive commercial grade windows serve well, but have a limited life expectancy. The glass is insulated and clear. Their condition is good. We did note several areas however, where the insulated window unit had lost its seal and had begun to cloud up. The windows themselves have an estimated useful life of 25 years. It is recommended to replace those glazing units that have failed.

### Exterior Doors and Frames

The exterior doors are hollow metal, both flush and glazed. They are in hollow metal frames, which for the entrances include side lites. The glazing is uniformly single. Their condition is fair, and we saw no failures. The estimated remaining useful life of these doors is 15 years. It is recommended to continue with the existing maintenance.

Roof



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The roof of this building is a single ply EPDM. This roof is in excellent condition, apparently because it was installed very recently. The only noted failures are all from former leaks, which had damaged soffits and ceilings. The estimated remaining useful life of this system is 15 years. It is recommended that the damage caused by the former leaks be repaired.

# Trim, Miscellaneous Specialties and Outbuildings

The trim is wood band and wood trims between the texture 1-11 panels, which is generally a rough sawn, stained finish. The outbuilding consists of the elevated parking deck.

The condition of the trim is good, having been regularly maintained. We saw no notable failures. The estimated remaining useful life of this trim is 15 years with continued proper maintenance.

The condition of the parking deck is less than poor, and should be demolished. Refer to the structural report for further details.

#### Interior Walls

The interior walls are gypsum board steel stud walls, nonbearing classification. Their condition is fair to good. It was noted that these walls provide a poor containment of fire separation. The walls were not very conscientiously completed to the deck above and there are many holes from utility penetrations, posing a flamespread hazard. The estimated remaining useful life of these walls is 25 years. Recommendations include sealing the penetrations, repair the holes and complete the fire separations as required.

### Interior Floors

The floor construction of this building is slab-on-grade in the lower level and an elevated concrete slab poured in a permanent metal form on the upper levels. This permanent metal form does not appear to have been galvanized as it is subject to rusting in many areas where it was subjected to former leaks. It is also the same type of form that was used in the exterior parking deck, which currently suffers so greatly from rust.

# Interior Doors and Frames

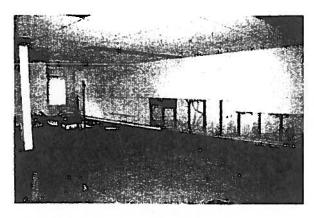
The interior doors and frames are uniformly flush hollow metal doors in hollow metal frames. Very little glazing is used, but where it is used, the glazing is wired glass. The hardware is commercial duty cylindrical locksets. There are few levers and very few closers are used. The condition of the doors and hardware is good. The stairs and some hazardous areas are not properly protected by latching operational and rated doors. The estimated remaining useful life could be 25 years. Recommendations are that the doors requiring fire ratings and handicapped accessibility be changed out to provide the required protection or access.

#### Interior Finishes

Generally the floor is carpeting or vinyl composition tile (VCT), although based on the age of the building this VCT could contain asbestos fibers. Testing would be required to determine this. The base of the wall is a vinyl, the ceiling is a mineral fiber panel, and the walls are painted gypsum board.



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The condition of the finishes varies from very poor to good depending on the location in the building. Notable failures include a serious deterioration due to moisture intrusion in the lower level. Some walls have actually been totally destroyed, floor tile has been lifted, and fungus and mold has wreaked havoc with the finishes in spaces throughout these areas.

The estimated remaining useful life of these finishes varies from zero to 15 years depending on the type and location. Recommendations are that lower level gypsum board finishes be replaced, that the lower level carpeting

be replaced, and the VCT, which may contain asbestos, be replaced. Upstairs, the carpet should be replaced as necessary over the next seven years. It is also recommended that the gypsum board be repainted over the next 8 years. The VCT flooring, while its condition is fair, could remain in use as it does not represent a hazard since it is properly adhered and does not exhibit the difficulties that are apparent downstairs.

Some of the mineral fiber ceiling panels in the lower level need to be replaced due to water damage, the remaining panels are in good condition and should have a life expectancy of 15 more years.

### Plumbing Fixtures

The fixtures in this building are vitreous china, and despite their low quality are in good condition. No failure were noted. The estimated remaining useful life should be 25 years with proper care.

### Lighting

The lighting throughout the building is fluorescent. The lighting level is adequate. The condition of the lighting is good with notable exception of the areas that have suffered from water damage, primarily the north side of the building. The estimated remaining useful life is 25 years. There are no recommendations other than replacing the damaged lights and continuing standard maintenance.

#### Accessories

The toilet partitions are porcelain enamel on steel, and they are generally in good condition. They should have a remaining useful life of 15 years. The lockers are painted steel. They are in fair condition and have an estimated remaining useful life of 8 years.

There are fire extinguishers in cabinets and mounted directly in storage areas. They are in excellent condition and should have 25 years remaining useful life.

The chalkboards, tackboards, and whiteboards are in good condition. They should have a remaining useful life of 25 years. The display cases is a wall mounted glass cases in the entry lobby. It is in fair condition, with an estimated remaining useful life of 15 years.

Toilet accessories are vendor supplied and are in fair condition. Their remaining useful life is four years.

Signage throughout this building is poor. No ADA signage exists. ADA signage should be provided.

Equipment



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There is no equipment pertinent to this report.

### Vertical Circulation

There is no elevator. The only access to the lower level is through the exterior, lower grade. The stairs are communication only as both levels have their own exit requirements to the exterior. The stairs exhibit many code violations. They are not properly protected and constitute an unprotected vertical opening.



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### **MECHANICAL**

The building is utilized by multiple town agencies. The front portion houses the police department and the rear areas were town offices until they moved out due to environmental concerns (water and mold damage) in lower level.

#### Boiler Plant

Present boiler plant consists of a single cast iron hot water gas fired boiler/burner unit. System was replaced in 1978 and appears in good condition. Pumps and support equipment appear to be in good operating condition. The only negative aspect is that there exists no back-up of primary heating source. Expected life of plant could be an additional 5 to 15 years.

Upper level perimeter radiation was found in good condition. The lower level residential baseboard radiation was found in poor condition, with broken and missing enclosures.

Recommendations include adding backup boiler and replacing/repairing lower level radiation.

### Ventilation and Air Conditioning

Police facility systems appear to be operating satisfactorily. Systems consist of central air handlers with DX cooling served by roof mounted electric powered condensing units. Present age of exterior units are 19 to 20 years old. Expected life of these units are 20 years if well maintained. Air handlers will normally have a 30 year life expectancy. Present condensing units have efficiencies around 8.5 to 8.8 EER (newer units range from 10.5 to 15 EER).

Minor complaints existed last year with little or no complaints this cooling season.

Lower level air conditioning systems seems marginal at providing adequate ventilation. Supply diffusers are small in size suggesting insufficient quantity of air change. Also outdoor air values appear to be marginal (ventilation is not purging standing odors).

The lower level mold growth and the infiltration of ground or rainwater must be corrected prior to any corrections to the ventilation. Humidity in the lower level is high. Enhanced ventilation cannot correct this condition. In addition, this space should be served by multiple air conditioning units where the exterior areas are separated from the interior areas.

All of the area air conditioning units utilize plenum returns where the ceiling space is used for a return air duct. The use of plenum ceilings in this manner does not allow for uniform air balancing.

Radiation in "Old Records Vault Room" needs replacement.

#### Temperature Controls

Present controls consist of point of use "Penn" devices, with separate day and night thermostats centrally located in occupied interior rooms. Controls are electric/electronic type.

Present controls are satisfying the environmental conditions throughout the building with minimal areas experiencing larger than normal temperature swings. It is unknown if the thermostats have been recalibrated.

Recommendations include upgrading the controls to a full building, DDC energy management system.



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### **ELECTRICAL**

### Lighting

Exterior of building has mostly building mounted lighting utilizing some incandescent and some HID lamp sources. The sides and rear of the building appear to have below standard light levels for proper security purposes.

Building interior lighting has fluorescent light fixtures approximately 17 years old. Lighting levels appear adequate throughout the building. Lighting energy efficiency is fair to average.

Lower level exit sign/light in corridor requires replacement to double faced and change in arrow direction.

No self-contained emergency lighting was found. The emergency generator is utilized for emergency lighting. Prisoner areas and dispatch areas should have self contained emergency lighting in addition to this generator backup for security reasons.

Recommendations include upgrading and adding outdoor lighting. Also, retrofit interior fixtures with high efficiency fluorescent components.

#### Electrical Power

Emergency generator capacity found inadequate for building's emergency loads. During loss of power conditions, shedding of loads is required. Also location of generator room is questionable due to structural roof leaks.

Power receptacle spacing seems inadequate.

Handicap toilet room does not have a "call for aid" alarm system.

#### Fire Alarm System

The present fire alarm system meets the minimum requirements of NFPA. The system was upgraded within the last five years and the condition of equipment found well maintained. Exception is that it does not comply with ADA/ANSI standards for sound and visual warning capabilities.

Spacing and location of audio/visual alarm devices should be enhanced in some isolated areas.

Some areas missing initiation devices (detectors), i.e.: sallyport, janitor's closet, corridor outside prisoner areas, booking and fingerprinting rooms. Locker area/storage space should have heat detectors changed to smoke detectors.

### Security System & CCTV

Building is protected by a limited but adequate perimeter security system. CCTV cameras are strategically placed within the lobby, cell areas, sallyport, prisoner processing areas and exterior areas.

No Card Key System exists for police personnel security purposes and is strongly recommended to be added.

Present systems seem adequate at this time with an estimated life expectancy of 5 to 10 years.



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### Communications

Dispatch equipment and experts in this field should review radio systems for present and future needs assessments to meet future needs. Present normal life expectancy is around 10 years due to technology upgrades.

Telephone system should be reviewed by experts in this field for present and future needs assessments.



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### **PLUMBING**

The building has a public water supply service of adequate size. Piping is copper.

No toilet facility was found within dispatch area. Dispatchers must leave area and utilize handicap toilet room in corridor.

Photo lab has developing sink and neutralizer tank not in use, taking up valuable space for use by other purposes.

No emergency eyewash was found in prisoner area.

Prisoner cell toilet room has vitreous china lavatory and water closet. These should be changed to security type fixtures for protection of police personnel and prisoners



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# **FIRE PROTECTION**

Prisoner areas (cells, booking and fingerprinting) are not protected by a wet basin water sprinkler system in violation of NFPA standards.

Boiler room is also missing fire sprinkler protection.

Communications equipment room is not protected by any fire suppression system.

A new fire service should be added to service the above.



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# **Summary of Recommendations**

### Prioritized Work List

The following itemized maintenance and upgrade work is recommended under the prioritized groupings indicated. The Scope of Work listed does not include programming, space utilization and future needs considerations.

Opinion of Probable Costs \$130.000

## Code Work

- Re-orient upper level parking for handicapped access
- Seal penetrations in fire rated partitions
- ♦ ADA Improvements
  - new door hardware
  - signage
  - stair improvements
  - fire alarm improvements
- Fire rated doors/frames
- ♦ Stair improvements/rated enclosure
- ♦ Identify asbestos-containing materials\*
- Replace lower level exit lights/signs
- Fire alarm improvements
- Prisoner holding areas require sprinklers

Urgent

\$112,000

- ♦ Demolish parking deck structure
- ♦ Determine path of water intrusion, inspect foundations for undermining\*\*
- Replace water damaged drywall, VCT flooring, carpet, and ceiling tile on lower level
- Upgrade lower level ventilation systems

## Highly Recommended

\$400,000

- Repave, new curbing and walks
- Replace failed insulated glass units
- Replace water damaged light fixtures on north side
- Mechanical/Electrical/Plumbing/Fire Protection
  - add backup boiler
  - replace/repair lower level radiation
  - replace roof mounted condensing units
  - provide ducted air return in lieu of premium return
  - upgrade to DDC type HVAC control
  - upgrade exterior security lighting
  - retrofit interior lighting with high efficiency components
  - add electrical receptacles
- Add Security Access System (if Police Department remains)

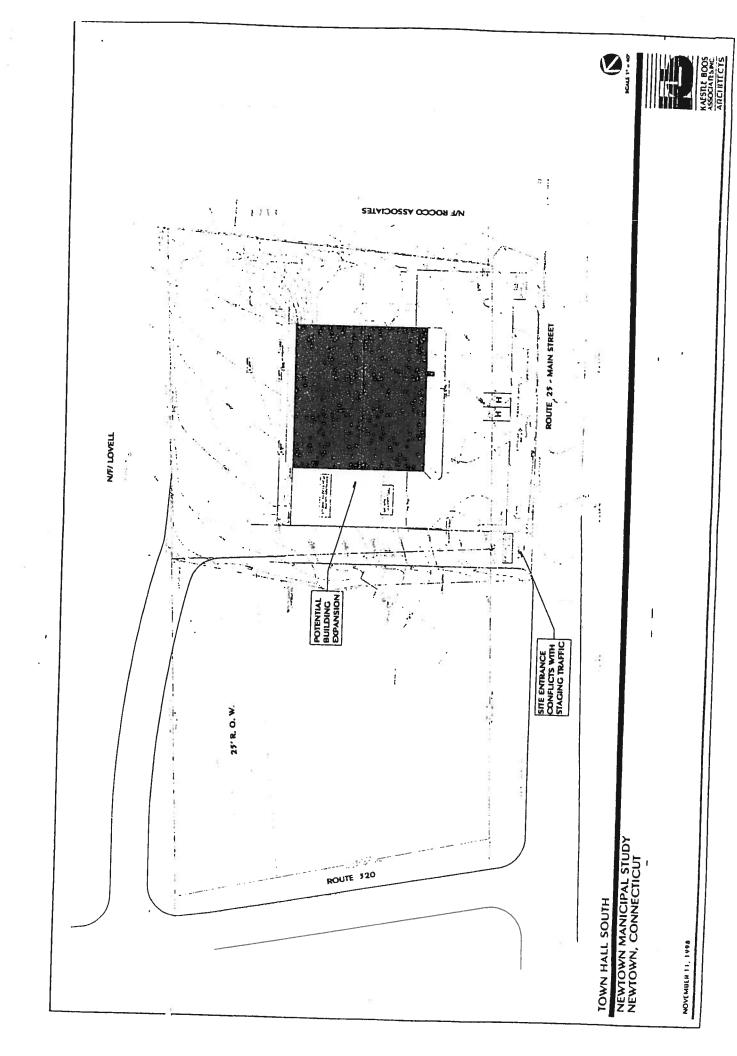


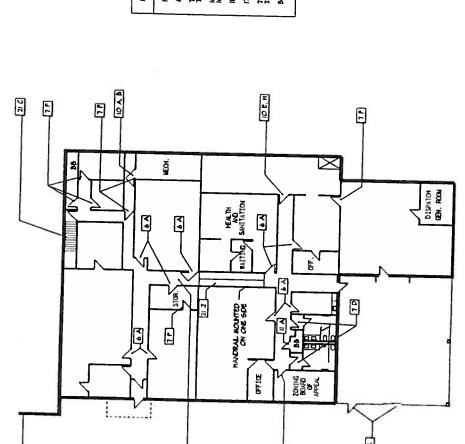
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Lowest Priority

\$36,000

- Repair water damaged soffits and ceilings (occurred prior to roof replacement)
- Repaint interior partitions
- \*Does not include abatement work
- \*\*Does not include repair work





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KETNOTE: GLOXED NUMBERS AND COMMENTS ARE CODE VOLATIONS)

IK DEAD BOLT LOCKED AGAINST EGRESS

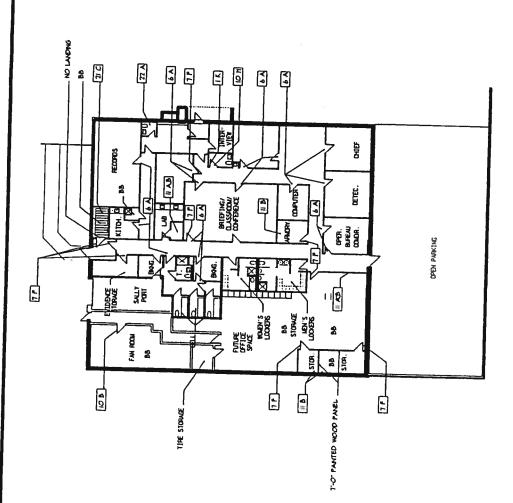
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EXISTING CONDITIONS TOWN HALL SOUTH NEWTOWN, CONNECTICUT



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    - BARE BLLDS

UPPER PLOOR PLAN

EXISTING CONDITIONS TOWN HALL SOUTH NEWTOWN, CONNECTICUT

