CASACCIO ARCHITECTS
Mission Driven Design

APPENDIX E – Facility Assessment
Thomas Memorial Library
Cape Elizabeth, Maine

Pond Cove Annex – Lower Level

General

1. The ceiling in most of the spaces consists of 12”x12” acoustical ceiling panels applied directly to wood strapping. This strapping is applied directly to the bottom of the floor structure above and leaves no ceiling cavity for the running of mechanical systems. Only the wiring systems are concealed within the existing joist space. Because the ceiling is directly fastened in place, the possibility for removing portions of the ceiling for access and to run new utilities does not exist. It was reported that it is very difficult to snake wiring through the ceilings to accommodate new equipment.
2. The ceilings are very low with various soffits projecting down between 6’-10” and 7’-1” above the floor.
3. All piping (hot water heat and sprinkler) is exposed to the space. Care was taken in the placement of the piping; however, it is abundant and runs throughout the lower level. All piping is painted to match the ceiling.
4. The entire lower level lacks any mechanical ventilation system and has very poor natural air circulation due to the number of separate rooms and the arrangement and enclosure of the rooms.
5. Moisture is a concern on humid days throughout the entire facility; it can become especially uncomfortable in the lower level of the building due to the very poor air circulation.
6. Most floors accessed by the pubic and offices are carpeted with the exception of the bathrooms which have vinyl surfacing. All finished wall surfaces are painted drywall.
7. Lighting on this level consists of surface mounted strip florescent fixtures housed in acrylic housings. This type of fixture is functional and is commonly used in utility type spaces. They introduce glare into the space and create visual “hot spots” throughout the space.
8. The entire lower level is partially below grade with short windows placed along the ceiling line. Views to the exterior are few and natural day lighting is minimal on the lower level. However, it should be noted that it is apparent that great effort and care have been taken to make the existing space as comfortable and user friendly as possible. It is also apparent that valiant attempts have been made to maximize the use of every square inch of space.
9. Existing documents indicate that all of the perimeter exterior foundation walls were built out with 2”x4” wood framing and insulated with R-11 insulation.

Mechanical Room

- Contains Boiler with 2 -150 gallon oil tanks
- Hot water heater
- 2 Barber-Colman Network 8000 Control Modules – Wall mounted
- Drywall ceiling enclosing the floor framing above.
- Chimney in Boiler Room may have some asbestos insulation on it. Will requiring testing prior to commencing any alterations.

Utility Room

- Contains 2 electric panels
- Panel L-1; 225 Amps, 120/240 Volts, Phase - 1, Wire – 3, Type – NOLP
- Panel L-2; 225 Amps, 120/240 Volts, Phase - 1, Wire – 3, Type – NOLP
- Also contains a utility sink and a ceiling mounted exhaust fan for an adjacent room.
- Some floor framing is exposed in the ceiling which is 2"x10" (actual) at 16'oc.

Maine Collection

- Specialty collection room that contains books of Maine significance or written by Maine authors.
- Space contains perimeter shelving and a central conference table.
- There are no mechanical provisions that allow for separate conditioning of the space as a meeting room or to protect valued materials that are stored in the room.

Records Preservation Area

1. Records Preservation
2. This space is used as a an Office / Workroom
3. Houses Historic Collection Index, files, computer, printer.
4. The main electrical service entrance is located In the NW corner of the space. This should be in an enclosed mechanical type space.

Historical Storage

1. Directly off the Records Preservation area
2. This space includes a wall mounted Sanyo air conditioning unit and an air filter/humidity control system that are dedicated to conditioning this space. Reports are that this system does adequately condition the space.
3. Contains shelving and map drawers for the storage of historical data, maps books etc.
4. A wet pipe sprinkler system and hot water heat piping are located within this area. This is not advisable since leaking or engagement of the sprinkler system could potentially damage irreplaceable historic materials.

Pond Cove Annex – Upper Level

General

1. The interior organization reflects a classic floor plan for a school of its time. The interior spaces offer high ceilings with large windows which offer views to the exterior as well as the introduction of abundant natural light deep into the space. Currently, these windows are partially concealed by a suspended acoustical tile ceiling system. The suspended ceiling constrains the once grand space and covers up an original plaster ceiling that exists almost 12 feet above the floor. The original ceiling appears to be in disrepair due to past construction activities and leakage.
2. The current floor plan is mostly open, offering views across much of the floor plan. A few enclosed spaces exist along the northern front of the plan which now house a special collection space (the poetry room), the reference collection, stairs to the lower level and the Library Director's Office.
3. The upper level of the Pond Cove Annex is mechanically served by a series of cabinet unit heaters which are placed around the exterior perimeter walls in the open library areas. These units heat source are fed by a hot water perimeter loop that also services hot water baseboard radiation in smaller spaces such as the office and Special Collections Rooms.
4. The entire second floor, although mostly open, does not have very good air circulation and has moisture problems on humid days.
5. The space does not have central air conditioning. There are two wall mounted air conditioning units placed at each end on the south wall of the Pond Cove Annex that are not adequate during the warmer days of the year. They also are very loud and disruptive while in operation.
6. The existing floor framing of the Pond Cove Annex consists of 1 ½" x 9" (actual size) at 16"oc spanning in an east to west direction.
7. The distance between the stacks in the open stack area is very tight, typically 32". This presents an ADA accessibility issue as the required clear space is 36". Clearance at the end aisles are also an issue as they are too narrow to meet ADA guidelines.
8. Floor framing was observed to be typically 2"x10" (actual) at 16'oc where it was exposed from floor below. This framing is supported by a series of closely spaced beams below that alternate between wood and steel. Building plans indicate that the original floor structure was supplemented with new steel columns and steel beams, most likely to meet floor loading requirements for library use at that time.
9. Finishes include suspended acoustical tile ceilings, carpet and either painted plaster or drywall wall surfaces throughout.
10. Lighting consists of acrylic lens 2x4 recessed fluorescent fixtures. This type of fixture generally cost effective yet creates glare.
11. There are no bathroom facilities on the upper level. All bathrooms for this wing are located on the lower level.

12. An additional separate room contains the Library's collection of large print books. This room is oddly configured to accommodate the landing for the mechanical lift.

Connector Link

General

1. The two primary library structures are connected by a link structure that was constructed in 1985. This ribbon link houses a centrally located main entrance, the Circulation Desk and two gallery type corridor spaces. One leads to the Adult Library and the other leads to the Children's Library on the upper level and the Meeting Room and parenting collection on the lower level.
2. This single story structure is a wood framed building resting on a concrete foundation and slab.
3. The Circulation Desk is located directly in front of the front doors. This exposes library staff to blasts of cold air during the winter months each time the doors are opened. The entire area is not large enough to function well as an entrance lobby. The area serves as a space where people meet and converse with each other. Unfortunately, this activity competes with the check-in and check-out function and is also disrupted by deliveries which must enter through the front door.
4. It was reported that the heating system in this area does not work well and that there are extreme swings in temperature that cannot be adequately controlled.
5. The entry floor level is directly accessible to the walks on the exterior, but does not share a common floor plain with any floor of the other library structures.
6. Finishes include painted drywall ceilings, carpet and painted drywall wall surfaces throughout.

Spurwink School and Spurwink School Annex – Lower Level

General

1. The ceiling in most of the spaces consists of 12"x12" acoustical ceiling panels applied directly to wood strapping. This strapping is applied directly to the bottom of the floor structure above and leaves no ceiling cavity for the running of mechanical systems. Only the wiring systems are concealed within the existing joist space. Because the ceiling is directly fastened in place, the opportunity to remove portions of the ceiling for access and to run new utilities does not exist. It was reported that it is very difficult to snake wiring through the building for new equipment.
2. The ceilings in the Spurwink School are very low, 6'-9"with various soffits projecting down to 6'-7" above the floor. This is well below what current codes allow.
3. The ceilings in the Spurwink School Annex are very low, 6'-7" above the floor. This is also well below what current codes allow.

4. All piping (hot water heat and sprinkler) is exposed to the space. Care was taken in the placement of the piping; however, pipes are abundant and run throughout the lower level, further lowering the ceiling clearances. All piping is painted to match the ceiling.
5. The entire lower level lacks any mechanical ventilation system and has very poor natural air circulation due to the arrangement and enclosure of the rooms housed there.
6. Moisture on humid days is a concern throughout the entire facility. This is especially true on the lower level of the building due very poor air circulation. The area can become quite uncomfortable on hot, humid days.
7. There is one unisex bathroom on this floor that serves the entire wing. This is quite inadequate considering that the rest room serves both the meeting room and the entire children's area.
8. Floors and offices are carpeted with the exception of the bathroom which has vinyl surfacing. All finished wall surfaces are painted drywall.
9. Lighting on this level are surface mounted strip florescent fixtures housed in acrylic housings. This type of fixture is functional and is commonly used in utility type spaces; however, they do introduce glare into the space and visual hot spots throughout the space.
10. The entire lower level is partially below grade with short windows placed along the ceiling line. Views to the exterior are few and natural day lighting is minimal to these spaces.
11. Existing documents indicate that all of the perimeter exterior foundation walls were not insulated during the last renovation.
12. One of the exits from the Meeting Room is through a bulkhead type of arrangement that does not have proper headroom or landings at the top of the stairs.

Spurwink School and Spurwink School Annex – Upper Level

General

1. The Spurwink School is a traditional one room schoolhouse. It is located on the south end of the library facility in front of the Spurwink School Annex, which was added in 1957. The original schoolhouse has a long history of being moved from various locations throughout the town. The exterior conveys a classic New England School aesthetic with its two articulated front entrances. Each door enters into a small enclosed vestibule type space. Behind the entrance lies a single open space with a rhythm of vertical double hung windows along each side. Several renovations have occurred over the years that have greatly diminished the interior's historic character. These renovations include the addition of two ADA lifts and the removal of the rear wall that now opens directly into the Annex addition.

2. Much of the exterior character of the School has been maintained. This includes detailing and trim work at the eaves and corner boards as well as the articulated entrances and canopies above each door.
3. The interior walls of the schoolhouse have a painted vertical wood wainscot and a natural shellac finished vertical wood bead board wall surface. The original ceiling surface is not visible as it has been hidden behind a suspended acoustical ceiling system. Floors are currently covered by carpeting throughout.
4. One of the entrance vestibules currently serves as a very cramped office space. The other serves as an emergency access, access to a set of stairs that leads to the lower level and a data system wiring panel. These data panels are found in several locations in the facility and ultimately should be relocated to secure dedicated wiring closets.
5. The existing floor framing of the Spurwink School Annex consists of 1 ½" x 9" (actual size) at 16"oc spanning in a north to south direction. This floor framing is supported by a center beam which consist of 4-1 ½" x 9" (actual size) members spliced together. The framing rests on a wood ledger and is framed into the side of the center carrying beam. It was reported that the library shelving on the floor in the Children's Library is widely spaced and can only be 48" tall because the floor's loading capacity is not sufficient to support greater stack height or density. This greatly limits the usefulness and flexibility of the space.
6. The heating system is a perimeter baseboard hot water heat served from a boiler located in the lower level. As in the remainder of the building, humidity is an issue. The entire wing lacks a mechanical ventilation system.
7. Several issues with water penetration along the perimeter exterior walls of the Annex were reported. Visual evidence of this can be found in several locations where the interior wall finishes are peeling away from the wall framing and staining is present. Evidence also exists around the windows. This includes wood rot and movement of the wall and windows when only slight pressure is applied.
8. The windows in the Annex neither match, nor compliment those of the historic schoolhouse. They appear foreign in both size and proportion.
9. There are no bathroom facilities on the upper level. The only restroom for this wing is located in the lower level.
10. Finishes in the annex include suspended acoustical tile ceilings, carpet and either painted wood plywood sheathing or drywall wall surfaces throughout.
11. Lighting consists of acrylic lens 2x4 recessed fluorescent fixtures. This type of fixture is generally cost effective. However these fixtures also create glare and ceiling hot spots.
12. A direct ADA accessible access/egress does not exist. The front exit leading out onto the existing front porch has a large step at the exit doors.
13. A wall mounted air conditioner that serves the Annex is located on the south wall.

Code Issues

1. Code in effect – International Building Code 2003
2. In some areas in the schoolhouse, the existing book stack space has a clear dimension between the book stacks of only 32" which does not meet ADA guidelines. Current accessibility codes require a minimum of 36' clear between the stacks. In contract, spacing of shelving in the annex is wide due to inadequate floor loading capacity.
3. Stairs up to Children's Library from Circulation Link have 7 ½" risers. 7" is the maximum allowable under code.
4. Ceiling height in the Meeting Room in the Lower Level of the Spurwink School Annex is 6'-7".
5. Ceiling height in the Parenting Collection Area in the Lower Level of the Spurwink School is 6'-9" with a beam projection running through the space at 6"-9".

Interview Notes:

Ernie MacVane – Facilities Manager

1. The Annex and the Original One Room Schoolhouse are considered as historic buildings by the Town. The exterior envelopes need to be respected; however, not a lot of consideration needs to be given to the interiors since they have already been remodeled.
2. The Library's complex of buildings includes several systems that need to be replaced. Several systems have large maintenance requirements.
3. The ADA mechanical lifts are unreliable and have serious operational issues. They are difficult to keep operating and it has become next to impossible to get replacement parts. It was also noted that people with disabilities and many elderly residents who have difficulty with stairs don't use the Library because of accessibility issues. When they are operating at all, the lifts are very loud and that people are uncomfortable using them.
4. Automatic paddle actuated doors should continue to be utilized.
5. The existing electrical service for the facility is only 400 amps, which is too small. Electrical service needs to be upgraded simply to support existing electrical needs. The current system is currently maxed out. Existing power is single phase. The Facilities Manager said he was not sure if 3-phase is available in the area. The upgrade should be a minimum of 600 amps, with 800 amp service preferred.
6. At a minimum, the entire heating system needs to be replaced as it is old and very inefficient. Heating costs for the Library are very high for the size of the facility with an annual fuel consumption of over 8,000 gallons per year. It was also noted that there may be asbestos in the current system on the flue and in the roping.
7. The current system does not provide adequate provision for controlling the level of heat provided to most spaces.
8. The Spurwink School section is heated with a kerosene-fired boiler that is scheduled to be switched over to gas this year. The fuel storage tank is located outside adjacent to

the mechanical room for the school wing. This system is especially problematic as large temperature fluctuations occur due to not having a system that has appropriate control capabilities.

9. There is a separate mechanical room for the annex as well as the Spurwink School. The electrical service entrance, electrical panels and telephone/data panels are also located a several different areas throughout the facility. This creates inefficiencies and security issues by not having these functions in centralized dedicated spaces.
10. The facilities lack a central air conditioning system. The Annex building does have two wall mounted window type units installed which provides minimum comfort levels to this portion of the facility.
11. The preferred system would include a HVAC unit with DDC controls.
12. The existing buildings also do not have a perimeter drainage system. This can be a problem at times. Issues also exist with the interior floor drains. They are not always reliable.
13. The Annex does have new double pane windows. However, their size makes them very hard to operate.
14. Underground oil tanks exist on the site. These abandoned tanks should be removed.
15. There is no ADA compliant exterior egress from the Spurwink School. The existing exterior doors exit onto a porch that runs along the front of the building.
16. There are several windows and window framing in the Spurwink School addition that are rotten. These need to be replaced. There are several areas where water damage is evident by the peeling away of the interior wall surface, staining and window movement when gentle pressure is applied.
17. Humidity control in the building is a major problem. Currently, there isn't any mechanical ventilation system in any of the library spaces.
18. A video surveillance system should be considered as web based systems are currently being installed in all Town facilities. Infra-Struct is the system currently being utilized.
19. The preference for all new facilities in Cape Elizabeth is to be as green as possible.
20. Card access needs to be considered for the facility at all public entrances with the ability to program doors with the opening and closing times of the facility. The Town is moving in that direction with other Town owned facilities.
21. The existing skylights have been a problem and have required frequent maintenance. They sweat and drip. The lack of a ventilation system and humidity control contribute to this issue.
22. Lighting currently stays on all day in most areas. Occupancy sensors should be considered to turn off lighting in unoccupied spaces.
23. All of the library buildings have been resided.
24. At grade access does not exist at any of the library function spaces with the exception of the Connector building. There is grade access to the front door which is located with the Circulation/Information desk, but all other functional area require the use of stairs or lifts.

25. A diesel generator should be considered to power egress lighting and provide continuous mechanical services to the areas housing historical items. Currently the egress lighting is powered from battery packs that service multiple lights.
26. The number and size of bathroom facilities are both inadequate. The restrooms are located in remote locations that are not easily accessible from the primary use spaces.
27. Wiring in the basement is very difficult due to the closed ceiling cavities. The use of cable trays should also be investigated to maintain telephone/data wiring.
28. The existing gutter system on the annex has been shingled over and is no longer in use. Proper venting in the attic of the Annex needs to be addressed. Currently, the only ventilation is through the cupola. Perimeter ventilation at the eaves should be provided to enhance cross ventilation. The existing cupola also needs modifications to make it weather-tight. Currently wind blown rain and snow enter the attic space through it.
29. There are not enough parking spaces for the facility. The existing parking is sufficient for normal library use but is inadequate for events and special programs.
30. Existing parking lot lighting is inadequate and is currently rented from CMP. This arrangement should be reconsidered with any parking reconfiguration.
31. Lighting along the walking surfaces is inadequate and is problematic especially during the winter months.
32. The Library Entrance is on the north side of the building which creates exposure and icing issues during the winter months.
33. The roof of the Pond CoveAnnex was recently re-shingled and is in good condition. The roof on the Spurwink School wing is failing and is in need of repairs and resurfacing.
34. Protection from the weather at the entrance doors to the library exist due to a sheeting effect that occurs along the façade. Protection and a water collection system is needed in this area.
35. The water collection system for the parking and entrance areas needs to be updated. Currently there is a catch basin located at the bottom of the parking lot where the entrance walk to the library begins. All the water from the parking runs towards the front door and flooding occurs at times during the winter months when the basin becomes blocked. This condition requires a lot of extra attention from the Town crews to monitor and maintain so that water does not back up into the library.
36. The configuration of the existing floor plan makes it impossible to visually supervise many of the library areas.
37. Lack of a delivery point requires that all deliveries come through the front door in conflict with the library patron traffic. This also results in visual clutter with stacks of boxes and mail collecting at the front desk. (Approximately 6 totes per day).
38. The location of the Circulation/Information Desk directly inside the main entry door creates a comfort issue during the winter months. When the front doors open, the desk is in direct exposure to the outside cold. This problem is intensified at times when visitors arriving to the Library utlilize the automatic doors which leave both doors open

for a short period of time. Library staff member have to wear heavy clothing to stay warm.

39. The sprawling configuration of the existing facility makes it difficult and costly to maintain.
40. Circulation/Information Desk area is undersized. The amount of traffic and volume of materials and products that pass through on a daily basis considerable.
41. The public generally sees the existing library facility as charming because of its size and quirkiness.
42. The Meeting Room in the lower level of the Spurwink School Annex presents several challenges. One is the presence of many columns in the space that impair sight lines. Another is that there is no outside access for after hours use. A single unisex bathroom serves the entire wing and is an additional limiting factor. Outside groups that have used the space in the past include the Historical Society (30-60 people), the Grange and Scout Troops.
43. Currently the Community Services Building is a public source for community type meeting space; however, high demand is beginning to extend that facility beyond its capacity.

Robert Malley – Public Works Director

1. The Public Works responsibilities include mowing, plowing, garden care and landscaping.
2. Plowing of the existing site presents a couple of obstacles. Currently the only place to pile the snow is at the end of the parking lot, opposite the entrance.
3. The library is located in the Town Center District, which requires planted islands to be incorporated into the plan every 10 parking spaces. This would present challenges to any future alterations to the parking area as they would have to meet this requirement as well as provide an area for snow storage. The islands do present snow removal challenges for the road crews as they have to navigate equipment around the islands while minimizing any damage to curbing and walks.
4. Winter maintenance of the exterior walks is currently handled under a separate outsourced vendor contract.
5. Any plantings that are implemented into future designs should be maintenance friendly as well as drought resistant. Various lilies are an example of an appropriate garden plant. There also is an issue with deer eating the landscape vegetation, especially yews and hedges.
6. The existing sidewalks are bituminous. Future consideration should be made to providing concrete walks.
7. All future curbing should be granite if possible, concrete at a minimum. Bituminous curbs are not acceptable as they are too easily broken and present a maintenance issue.
8. Small plow tractors are utilized for plowing walks and other required access areas.

9. Site drainage is not currently a major problem; however the existing catch basin in the southwest corner of the parking lot adjacent to the entrance walk is not in a good position. If it ever became blocked, flooding would occur at the building entrance. This is a constant maintenance issue, especially during the winter.
10. The utilities to the facility currently run overhead. Future consideration should be given to moving them underground.
11. The existing sanitary mains that serve the site are 8", storm water mains are 12". Each of these were recently upgraded and should be adequate to serve the any future library expansion.
12. Recycling and trash storage facilities need to be easily accessible.

Peter Gleeson – Fire Chief

1. Water flow to the existing fire suppression system is currently marginal, but acceptable. Any future expansion may require an upgrade to the system to increase flow.
2. Sprinkler coverage for roof and ceiling cavities and roof overhangs needs to be reviewed for current requirements if any renovations occur. These spaces are currently unprotected.
3. Existing accessibility for fire personnel and apparatus is currently acceptable. As close to 100% coverage as possible is desired within reason. Currently the site is directly accessible from two locations at each side which provides approximately 75 – 80% coverage for apparatus.
4. Fire alarm panel upgrades would be required if any significant alterations or expansions were to occur.
5. The fire and rescue staff is volunteer only, no full or part time fire and rescue staff. The police staff is full time.
6. Provide keyed (N) fire alarm pull stations and fire alarm panel.
7. Cape Elizabeth does not have any local fire ordinances, the project will be reviewed by the current building code.