INTRODUCTION
The Caryl Community Center is an adaptive reuse of the former Caryl Elementary School that was constructed in three phases: 1910, 1931 and 1971. In 2001, the school moved to new facilities and the Town has been incrementally repairing and improving the building for continuing use. Projects thus far have included roofing, masonry repairs and toilet renovations. The next significant improvement will be replacement of the aging boilers, heating distribution equipment, ventilation systems and temperature controls. The existing heating system is outdated and the ventilation system was based on the former school use and codes that required higher levels of outside air and its resultant greater energy usage. The conceptual cost of the next facility improvement will be a substantial expenditure that will trigger the need to meet current accessibility regulations for the entire facility.

This study was commissioned by the Board of Selectmen in January 2016 and was completed in June of the same year. Mills Whitaker Architects LLC performed the services related to this study. No other professional consultants (mechanical, electrical, structural, civil, estimating) were used during the course of this review. The accessibility study included the following elements:

1. Review existing conditions of the facility relative to conformance with 521 CMR, the regulations of the Massachusetts Architectural Access Board.

2. Identify deficiencies relative to accessibility standards and recommend improvements that should be made and/or possible variances that could be sought in lieu of full compliance.

3. Develop a preliminary outline plan and conceptual budget for addressing deficiencies, including soft costs related to recommended variance requests and renovations.

FACILITY DESCRIPTION
The existing facility is a two-story brick building consisting of approximately 41,300 square feet. A third floor mezzanine level is located above the former library space in the 1971 wing. Uses in the building include a pre-school program (CDC), Council on Aging (COA), Parks & Recreation offices, a dance studio (Erin’s) and a local support group for young families (Parent Talk). The building’s uses and maintenance are overseen and operated under the direction of the Board of Selectmen.

Existing accessibility provisions include an accessible front entrance, a two-stop passenger elevator, accessible toilet rooms (renovation in progress) and accessible drinking fountains. Not all spaces are accessible to persons with disabilities, the most notable of which are the gymnasium and mezzanine levels, and not all features of the building are in compliance with current accessibility regulations.
ACCESSIBILITY REGULATIONS

Regulations of the Massachusetts Architectural Access Board (521 CMR) require compliance in existing buildings based on expenditures for permitted renovations over a three-year period. If the cost of work amounts to 30% or more of the “full and fair cash value” of a building, exclusive of land, then the entire building must comply with current regulations, just as if the facility were being built new. Invariably, certain aspects of an existing building may become the subject of variance requests. Variances can be granted by the Board if an applicant demonstrates that full compliance is technically infeasible, or if the cost of full compliance is excessive as compared to the benefit gained by the disabled. When variances are granted for specific components, then those are considered to be in full compliance with 521 CMR.

The “full and fair cash value” of the building is the value listed in the Town Assessor’s office and then equalized by the assessment ratio used by the Department of Revenue. The Assessor lists the 2016 building value at $3,214,900 ($4,075,200 total including land). At this value, if all permitted work at the building were to total $964,470 over a three-year period, then full compliance with current accessibility regulations must be provided. Building permit activity over the last three years consists of the current toilet room renovations in 2016 valued at $520,000, leaving an additional work cost of $444,470 to reach the 30% threshold. Thus far, work being performed has conformed to the regulations but the threshold of expenditure has not yet triggered full compliance for the whole building. The anticipated cost of the pending heating, ventilating and controls project will exceed the 30% trigger and mandate full compliance with current accessibility regulations.

521 CMR COMPONENTS

The Commonwealth of Massachusetts Regulations (CMR) was enacted in 1975, four years following completion of the 1971 additions and modifications to the Caryl School. The regulations have been revised several times, the most recent of which was in 2006. The Architectural Access Board of Massachusetts oversees 521 CMR. The regulations are organized into five parts:

- **PART A:** ADMINISTRATION
- **PART B:** BUILDING TYPES
- **PART C:** EXTERIOR
- **PART D:** INTERIOR
- **PART E:** DWELLING UNITS

PART A includes “Jurisdiction” of the regulations, the relevant portions of which were stated above in terms of when compliance is triggered based on the cost of renovations. There are also intermediate level triggers, but since the pending HVAC project at the Caryl Community Center will exceed the 30% rule, those intermediate compliance issues are not addressed in this report. PART A also includes variance information and specific definitions used in the code.

PART B lists specific requirements for various building categories. Community Centers are not listed as a separate building type and they bridge several of the uses listed. Relevant information for four types is included herein, namely: Commercial, Educational, Places of Assembly and Recreational facilities. In general, each of these four types must comply with all of 521 CMR but nuances for each use are further clarified in PART B.
PARTs C (Exterior) and D (Interior) describe requirements for the site and public use areas of a facility. PART E (Dwelling Units) is not relevant for this study since it is not a residential building. Relevant issues for each portion of the regulations are described below with a summary of conditions and the resultant recommendations for compliance. In some instances, variance requests are recommended when the cost of full compliance is likely to exceed the perceived benefit gained by the disabled.

**521 CMR 11 / Commercial Buildings:**
This building type includes municipal facilities and requires them to conform fully to 521 CMR. There are no specific issues listed in this section that are not addressed elsewhere in this report.

**521 CMR 12 / Educational Facilities:**
This building type includes pre-schools and requires them to conform fully to 521 CMR. In section 12.4, requirements related to sinks and counters in classrooms are addressed, specifying counter height and sink accessibility criteria. Two different types of sinks/counters are indicated in the drawings as follows:

- **S1:** Sinks/Counters in Occupied Areas (CDC, COA, Parent Talk)
- **S2:** Sinks/Counters in Unoccupied Areas (Park/Rec Storage, Mezzanine)

Existing sinks and counters in the classrooms, meeting rooms and hallways were installed during the 1971 addition and renovation work. While most sinks have lever-style faucet handles as required, they do not provide clear knee space below and the counters are higher than 34” AFF.

**Educational Facility Recommendations:**
1. *Remove the non-accessible sinks/counters in the CDC corridor areas in two locations. These should not be located in the path of egress per the building code and are redundant given that each CDC classroom also has a sink and counter.*
2. *In the other S1 locations, replace the existing sink, counter and base cabinet with accessible versions of the same (34” counter maximum height, clear knee space with correct piping array).*
3. *Sinks in the S2 locations can remain as-is unless they are renovated into public use spaces.*

In addition, the “Educational Facilities” section notes that any “Recreational Facilities” associated with this building type must comply with 521 CMR 19. Refer to that narrative for the gym and playground.

**521 CMR 14 / Places of Assembly:**
An “Assembly Area” is defined in 521 CMR 5 (Definitions) as, “A room or space accommodating a group of individuals for recreational, educational, political, social, or amusement purposes or for the consumption of food and drink.” In 521 CMR 14.5, this is clarified to include any meeting room that can accommodate at least 50 persons. This occupancy threshold requires the provision of assistive listening systems for the hearing impaired. Spaces that meet this potential occupancy load in the Caryl Community Center include the Dining Room, Blue Room and Library.

**Places of Assembly Recommendations:**
1. *Provide assistive listening systems in the assembly areas in conformance with 521 CMR 14.5.*
521 CMR 19 / Recreational Facilities:
The gymnasium and playground areas of the Caryl Community Center are classified as recreational facilities. The gymnasium is on a lower level that is not accessible, and this issue is being addressed as explained in the narratives on Entrances (521 CMR 25), Stairs (521 CMR 27) and Elevators (521 CMR 28). The exterior playground space at the facility requires an accessible route to provide a path to the play space and to its equipment.

Recreational Facility Recommendations:
1. Provide vertical access to the Gymnasium as explained elsewhere in this narrative.
2. Provide an accessible route to and within the surrounding of the exterior playground.
3. Note that the existing bleachers in the Dining Room do not conform to accessibility regulations, and the drawings indicate that these should be removed rather than be replaced.

521 CMR 20 / Accessible Route:
An accessible route needs to be provided at the exterior and interior of all public portions of the site and building. In addition to the note above regarding playgrounds (521 CMR 19), there are three elements at the building's interior that need to be addressed. Two of the three relate to existing drinking fountains that protrude more than 4” into corridors in the zone between 27”-80” AFF, thereby creating a hazard in the accessible route. The third area is the open floor area below the mezzanine stair where the intermediate landing is open to the adjacent library area, creating a headroom hazard.

Accessible Route Recommendations:
1. Remove the two protruding drinking fountains (DX on drawings) as noted in 521 CMR 36. These are located in the 1971 Link hallway at both floor levels and are redundant with other accessible drinking fountains that are nearby on each floor level (see DF in drawings).
2. Provide cane detection guards between the upright posts at the open area below the mezzanine stair to a height of 27” AFF to protect headroom clearances below the landing.
3. Provide an accessible path in the playground as noted in 521 CMR 19.

521 CMR 22 / Walkways:
The regulations require that exterior walkways not exceed a 5% running slope (1:20) in the direction of pedestrian travel and a 2% cross slope (1:50). Any running slopes in excess of 5% require provision of an accessible ramp with dual-height handrails at each side. At the front of the building, there are two sections of walkway that exceed 5% but are not configured as ramps. Rather than construct ramps, grading can be modified in order to reduce the slope appropriately.

Walkway Recommendations:
1. At the approach walkway from Springdale Avenue, re-grade the sidewalk to eliminate the steep section of approximately 7.7% that slopes down from the street. The grade difference between the street sidewalk (160.13’) and the main entrance (158.93’) over a distance of about 98’ should yield an average overall running slope of less than 2% while still providing adequate drainage.
2. At the Blue Room exit door, re-grade the steep walkway (12.5%) to slope more gently (<5%) to the front walkway, thereby avoiding construction of a ramp.


**521 CMR 23 / Parking:**
Existing parking for the facility is located in striped parallel spaces on Springdale Avenue, striped spaces within the site (front, side and back) and in unmarked spaces in the back gravel lot. There are four so-called accessible spaces marked for use, two at the street and two by the front entrance. The spaces at the street are not in compliance (no marked access aisles and no flush curbs) while the two by the front door require driving on the entrance walkway and constitute a pedestrian safety hazard.

Excluding the street parking, which is not applicable, there appears to be a capacity for parking about 60 cars on site at present: 2 at the front door, 3 unmarked spaces by the back door, 8 at the entry drive, 11 diagonally striped spaces in the side drive, and 36 in the gravel lot (subject to future layout review). For facility parking in the range of 51-75 spaces, a minimum of 3 accessible spaces is required, at least one of which should be van accessible.

**Parking Recommendations:**
1. Delete the two accessible spaces at the front walkway and entrance area (hazardous, awkward).
2. Provide two van-accessible spaces at the rear entrance area in the currently unmarked space adjacent to the back entrance (see recommendations for accessible entrance at back). Provide a shared access aisle (8’ wide) with cars parked between the back entrance and back play area.
3. Provide one or two additional accessible spaces in the parking area near the back entrance.
4. Existing “accessible” parallel spaces at the street are not relevant for building compliance.

**521 CMR 25 / Entrances:**
Current regulations require all public entrances into a facility to be accessible, with the exception of a service entrance (unless it is the sole entry). This facility has ten exterior doors, three of which serve as entrances while the remaining seven are used only as exits (and for boiler room service). The drawings indicate the exterior doors with an “E” designation for entrances and an “X” for exits as follows:

- **E1:** FRONT ENTRANCE – from Springdale Avenue
- **E2:** BACK ENTRANCE – from back parking lot
- **E3:** SIDE ENTRANCE – from exit driveway
- **X1:** BLUE ROOM EXIT – to front walkway
- **X2:** DINING ROOM AREAWAY EXIT – to exit driveway
- **X3:** BOILER ROOM AREAWAY EXIT – to exit driveway (boiler room service)
- **X4:** GYMNASIUM AREAWAY EXIT – to exit driveway
- **X5:** CDC CLASSROOM EXIT – in southwest corner of 1971 addition
- **X6:** EAST STAIR EXIT – to side yard along Centre Street
- **X7:** ERIN’S DANCE STUDIO FIRE ESCAPE EXIT – to exit driveway

Of the three public entrances, only the front entrance is currently accessible. The back entrance is used very regularly (more than the front) while the side entrance is used less frequently.

**Entrances Recommendations:**
1. Make the back entrance accessible by providing an exterior ramp to a raised landing platform and eliminate the step up at the threshold. Refer to recommendations for Stairs (521 CMR 27) and Elevators (521 CMR 28) for interior modifications to provide access from the back entry interior landing to the gym, first and second floor levels.
2. **Request a variance for the side entrance and provide signage to accessible entrance locations.**

Accessibility issues related to exit doors are described separately in the “Doors” section that follows.

**52 CMR 26 / Doors & Doorways:**

Current regulations require all doors and openings along accessible routes to meet minimum clear widths, maneuvering clearances and accessible hardware features. The existing facility has about 97 door openings (counting paired doors as one; excluding doors in operable walls).

- 7 Existing Openings are accessible (includes 4 at toilet renovations in progress)
- 20 Existing Openings are for staff use only (accessible route provision not required)
- 70 Existing Openings are public doorways that are currently not accessible

Of the 70 openings that are not accessible, deficiencies fall into the following categories:

- 70 openings have knob set latches that require replacement with lever set hardware;
- 9 openings have restricted maneuvering clearances for door access that need correction;
- 11 openings have restricted maneuvering clearances, but variance requests are recommended;
- 2 openings have maneuvering clearance issues, and automatic operators are recommended;
- 6 openings have maneuvering issues but are primarily controlled by staff; request variances;
- 7 openings have thresholds or floor level issues that require corrective work or variances

Another aspect of the current regulations states that required egress doors that lead directly to the outside at grade in educational and assembly type buildings with over 150 occupants must be accessible at both the interior and exterior sides of the doors. While there are ten exterior doors at the building, only six are required as exits while the other four are redundant or limited to service only.

**Doors & Doorways Recommendations (see drawings for “legend items” as noted below):**

1. Upgrade hardware for 70 existing doors at accessible routes from knob sets to latch sets.
2. Improve maneuverability clearances at 9 openings as noted in the drawings (Legend Item 2).
3. Request variances for maneuverability issues at 11 openings (Legend Item 3).
4. Provide automatic door operators with actuators at 2 openings (Legend Item 4).
5. Request variances for 6 openings in CDC area that are controlled by staff (Legend Item 6).
6. Address threshold and floor level issues, or request variances, at 7 openings (Legend Item 7):
   a. Back Entrance: delete step up at stoop while making back entrance accessible.
   b. Side Entrance: request variance for step at door due to exterior areaway and drainage.
   c. Gym Exit: request variance for step at door due to exterior areaway and drainage.
   d. Gym Entry: lower and taper existing door threshold to comply with height and slope.
   e. Dining Room Exit: delete this exit and create safe second means of egress via adjacent Blue Room as recommended in a separate study issued on 10/22/2015 and 2/26/2016.
   f. CDC Class Exit: door at S.W. corner is not required as an exit and should be removed.
   g. Erin’s Dance Studio Exit: door (+ stairs) not required as an exit and should be removed.

**521 CMR 27 / Stairs:**

There are four sets of interior stairways in the building. The central stair and back stair serve the first and second floors. The east stair serves the first, second and third floors (library mezzanine) and the
remaining stair is an open stairway connecting the library to its mezzanine level. With the exception of the mezzanine stair, each of the other three stairs has wall-mounted handrails with guardrails on the opposite side. The mezzanine stair has guardrails on both sides. None of the guardrail heights meet current code and few of the handrails meet current regulations either, but neither of these conditions is unusual for existing buildings since codes have changed many times following original construction.

The back interior stairway also serves the back entrance. This back entrance level is located at an intermediate landing between the first and second floor levels.

There are five exterior stairways, one of which serves the side entrance while the others are for service (boiler room) or exits (dining room, gym, dance studio). With the exception of the gym exit, the dining room and dance studio exit stairs are not required due to the alternate availability of interior exit paths. In the case of the dining room, some interior modifications are required in order to delete the areaway, while the dance studio already has three interior exit doors, so the exterior exit (+ stair) is redundant.

Stair Recommendations:

1. Replace wall-mounted handrails with compliant handrails that meet current code for height requirements (34” – 38”) and extensions (12” horizontal at top landings; 1 tread sloping + 12” horizontal at bottom landing).
2. Also provide lower set of handrails at areas where preschool children normally use the stairs.
3. At mezzanine level guardrail, add handrail with extensions to existing guardrail at outside perimeter of stair run.
4. At other interior stairs, request variance to retain existing guards without having to modify them and without having to add handrails, both of which will be based on the cost of full compliance.
5. Replace handrails at exterior gym exit stairs for compliance. Refer to Doors (521 CMR 26) for additional comments regarding accessibility issues at the gym exit.
6. Delete exterior stairway serving the dance studio since it is redundant.
7. Refer to the narrative on Entrances (521 CMR 25) and Elevators (521 CMR 28) regarding the proposed reconstruction of the back stair’s lowest portion from the gym to the first floor.

521 CMR 28 / Elevators:
Accessibility regulations require that a passenger elevator serve every accessible space and floor level. The drawings included in this study report designate the floor levels of the building as follows:

- L-0: GYMNASIUM – not currently accessible
- L-1: FIRST FLOOR – served by existing passenger elevator
- L-2: SECOND FLOOR – served by existing passenger elevator
- L-3: THIRD FLOOR (Library Mezzanine) – not currently accessible

If provisions other than a passenger elevator are used for vertical access, then variances for alternative forms of vertical access are required unless that is the only work being performed in a facility.

The existing elevator, located in the central stair hall, serves the first and second floors. Several aspects of the existing elevator meet current regulations, including dimensions of the cab, mounting height of hall call buttons, and the location of jamb markings on the frames. Components of the existing elevator that do not comply are noted in the recommendations herein.
Elevator Recommendations:

1. Upgrade deficiencies of the existing passenger elevator to bring into full compliance:
   a. Provide hall and in-cab lanterns with visual and audible signals.
   b. Relocate existing handrails in cab from 38” AFF down to 34” AFF (or seek variance).
   c. Upgrade the in-cab control panel to comply with requirements of 521 CMR 28.8.

2. Provide a limited use/limited application elevator (LU/LA) in the back stairway area to serve the four floor levels of the stairway. This will add access to the gym level and provide a second public accessible entrance as noted in the narrative for Entrances (521 CMR 25). Installation of a LU/LA, which will require a variance, is much less expensive than the cost of a full passenger elevator.

3. If the Mezzanine (third floor) were re-opened for public use, the most logical means of vertical access would be to install a vertical wheelchair lift in the open floor area. This would require a variance based on the excessive cost of installing a passenger elevator to serve this floor level.

521 CMR 30 / Public Toilet Rooms:
Existing toilet rooms include two multi-fixture men’s and women’s rooms on each floor, two single-user toilet rooms on each floor, and one single user toilet room inside the former school nurse’s office that is in use by the CDC on the first floor. Of these toilet rooms, the four multi-fixture toilet rooms (which are undergoing extensive renovations at the time of this study report) include accessible fixtures while none of the single-user toilet rooms are accessible.

Toilet Recommendations:

1. Provide signage at the single-user toilet rooms directing the public to the accessible toilets.
2. Request a variance to allow continuation of the non-accessible unisex toilet rooms based on the provision of signage above and justified by the cost of full compliance.

521 CMR 32 / Kitchens:
The existing facility has one warming kitchen (dining room) and one kitchenette (conference room). These two kitchens are identified on the drawings as follows:

K1: FIRST FLOOR – Dining Room Commercial Warming Kitchen
K2: SECOND FLOOR – Conference Room Kitchenette

Accessibility regulations require compliance for non-commercial kitchens that are used by the public while commercial kitchens are not regulated because they are assumed to used only by staff. In a community center, when a kitchen has commercial fixtures that are used by the public, the regulations are somewhat “gray” at best since commercial fixtures are not manufactured to be accessible.

The existing dining room kitchen has commercial fixtures, most of which were in use when the former school served hot lunches that were prepared off site and kept warm on the premises. In cases such as this some accessibility provisions need to be provided in order to accommodate the public even if not all features can comply with the regulations. Existing commercial fixtures include a refrigerator, hand sink, serving tray area, dishwashing area, convection oven and stainless worktable. A residential refrigerator and electric range are also provided in the current configuration.
The other kitchen facility in the building, at the second floor conference room, is more limited in that it only has a sink and microwave. The existing counter is 34.5” high with a base cabinet the full length of the kitchenette. The sink is only 7” deep and has accessible faucets, but there is no knee space below. This kitchenette is used only by staff and is not available for use by the public, so modifications to meet current accessibility standards are not required.

Kitchen Recommendations:

1. **Dining Room Kitchen:** make the following modifications and variance requests.
   a. Replace the hand-washing sink with an accessible hand-washing sink.
   b. Provide a worktable at 34” AFF with knee clearance below for accessibility.
   c. Provide a general use sink that is fully accessible.
   d. Request a variance for the hallway door clearance of 9” to the existing dishwashing counter, noting that the door leading into the more public end of the kitchen can be made accessible.
   e. Request clarification from the Board that the existing commercial fixtures will remain as-is. Note that the existing commercial convection oven is at an accessible height for cooking.

2. **Conference Room Kitchen:** modifications are not required unless converted into public use.

**521 CMR 36 / Drinking Fountains:**
The drawings indicate two types of existing drinking fountains. Those designated as “DF” are in compliance with accessibility regulations, while those designated as “DX” are not. Interestingly, an accessible style of drinking fountain can be located in such a way that it violates another aspect of the accessibility regulations, namely, the clearance width required (if a wall recess is less than 30” wide) or by protruding into the accessible route (by projecting more than 4” from the wall).

Drinking Fountain Recommendations:

1. Remove inaccessible units and cap piping in walls. Finish recess to match adjacent surfaces. These units are located near existing accessible drinking fountains and are therefore no longer required in current locations.

**521 CMR 39 / Controls:**
This section stipulates accessible heights and clearances for controls (e.g., light switches, outlets) and dispensers (e.g., toilet paper, hand soap) in accessible spaces. Generally speaking, switch heights of 48” AFF are in compliance. Not all control heights were observed in the existing building, so additional survey work will be required when the upgrades are to be done. Fire alarm pulls, however, are not in the range of heights mandated by code (many 58”–66” AFF; very few at required minimum of 48” AFF), and they were also not in the correct locations in all instances.

Controls Recommendations:

1. Make corrections to fire alarm pull heights and locations. Refer to recommendation to replace the existing fire alarm system per 521 CMR 40 due to other extensive alarm deficiencies.
2. In spaces that are not controlled primarily by staff (e.g., in public meeting rooms), lower the height of light switches to 48”. For rooms where staff are in charge of lights (offices, preschool classrooms), request a variance if any light switches are beyond these height limitations.
3. Confirm that receptacle locations are within 18” to 48” of the floor, and that none are within 18” of an inside corner.
521 CMR 40 / Alarms:
Visual and audible alarms are required for an accessible fire alarm system, including strobes that must be located in “restrooms, meeting rooms, hallways, lobbies, classrooms, and any general usage areas open to the public.” The existing fire alarm system has only minimal strobes in hallways, with the exception of the multi-fixture toilet rooms that are currently undergoing renovations.

Alarms Recommendations:
1. Replace and upgrade the existing fire alarm system to incorporate audible and visual alarms in all required spaces. There are too many changes needed for effective re-use and expansion of the existing fire alarm system. (Note that replacement of the fire alarm system was identified and budgeted as a long-term need in the 2003 Deferred Maintenance Study report.)

521 CMR 41 / Signage:
For the most part, existing rooms and spaces have signage that meets current regulations. However, some areas will need additional signage as noted below.

Signage Recommendations:
1. Provide accessible parking signage at new spaces by back entrance per 521 CMR 23.
2. Provide signs at existing non-accessible toilet rooms directing the public to the locations of accessible toilet rooms per 521 CMR 30.
3. Provide signage at all interior stairways.
4. Provide signage at the non-accessible side public entrance directing the public to the locations of accessible entrances per 521 CMR 25.
5. Provide accessible illuminated exit signs with the universal wheelchair symbol to differentiate between accessible and inaccessible exits.
6. Provide signs identifying the availability of assistive listening systems in assembly areas as noted in 521 CMR 14.

IMPLEMENTATION CONSIDERATIONS
This study was limited to addressing accessibility improvements and was not intended to address other future improvements to the facility. Compliance with 521 CMR will be required when the HVAC project is underway since the cost of that project will exceed 30% of the building’s value. We recommend incorporating the accessibility work into the HVAC project as part of one renovation. Doing so will prevent having to undo any related work in the mechanical and electrical trades. Also, involving more work should be beneficial to the Town in terms of a potential economy of scale and for limiting the disruptions associated with construction work in an occupied building.

For years, there has been consideration given to renovating the hallways, especially flooring, lighting and ceilings, in order to remove the visual vestige of the former school. Thus far, the walls have been painted and lockers have been removed, but no other improvements have been made to the corridors. Inclusion of that future work at the same time as the HVAC and accessibility work would be a very efficient way of procuring that aspect of the adaptive re-use project list, especially since much of the work involved will affect the corridors. Similarly, if the mezzanine level were to be made accessible for re-use, renovations of that dormant floor level should be done at the same time. No budgets have been developed for the corridors and the mezzanine level since they were not part of the study focus.
Prior to proceeding with project design and documentation work beyond schematic layouts, a variance application should be prepared and submitted to the Massachusetts Architectural Access Board for its review and decision. Variances are granted when the Board agrees that the cost of full compliance is excessive as compared to the benefit gained for the disabled. While components that are potential variances have been outlined above, the costs associated with full compliance in lieu of receiving those specific variances have not yet been determined. Those costs will be determined and submitted with the variance application when the project design proceeds. Our recommendations are based on experience with other similar building conditions and successful variance applications on other projects.

Assuming that the variances suggested are granted, the cost of achieving compliance is relatively high for this building. A detailed conceptual budget is attached to this report, indicating a value of $750,000, which amounts to a project cost of about $18 per square foot. A summary by project component, with rounded costs that include contingencies and fees, is as follows:

$268,000: Vertical Accessibility
- Provide small elevator in back stairway; modify back stairway at gym level; provide exterior accessible ramp and modified landing at back entrance; replace wall-mounted handrails at all interior stairways for compliance; provide vertical wheelchair lift to mezzanine level; upgrade specific components of existing passenger elevator

$237,000: Accessible Doors, Doorways & Exits
- Modify hardware at interior doors; modify openings for maneuverability clearances; remove and infill redundant exits (3); provide all associated patching and finishing

$188,000: Accessible Fire Alarm, Exit Signs & Electrical Devices
- Replace existing fire alarm system; provide illuminated exit signs with wheelchair symbol at accessible exits; modify light switches and outlets where needed; provide GFIs at lavs

$24,500: Accessible Exterior Walkway Improvements
- Modify front walkway to eliminate steeply pitching sloped walkway toward main entry; modify exterior walkway exiting from Blue Room to reduce slope for compliance

$32,500: Accessible Sinks, Counters and Kitchens
- Replace non-compliant sinks and counters in classrooms and meeting rooms where applicable; remove sinks and counters in CDC hallway and stairway areas; provide accessible fixtures in dining room kitchen

$750,000: Conceptual Budget for Accessibility Improvements
- Based on assumptions related to full compliance with 521 CMR
- Assumes that all variances noted in the narrative will be granted
CONCLUDING REMARKS
This study was undertaken to review conditions of the existing building and site to ascertain the extent of work needed to comply with current regulations of the Massachusetts Architectural Access Board (521 CMR). These regulations were not in effect until after the building had been constructed, so there are a number of issues that fall short of compliance. The regulations were first promulgated in 1975 whereas the last addition to the building was completed in 1971. The regulations are updated from time to time, and the current version was last revised in 2006.

Mills Whitaker Architects has extensive experience working on improvements to existing buildings and renovating facilities to comply with current accessibility regulations. When an expenditure of 30% or more of a building’s value is incurred in permitted renovation work over a three-year period, a building must comply with 521 CMR in full. The regulations allow for variance requests for certain features of a building if it can be proven to the Architectural Access Board that the cost of full compliance is excessive as compared to the benefit gained for the disabled. The Board makes decisions to grant or deny requests based on the merits of each building’s conditions and the types of items that are requested.

In the case of this study, the conceptual project cost for recommended improvements is $750,000, assuming that issues for which variances are requested will be granted. While determining the value of variance requests was beyond the scope of this study since that work is done during the preparation of a variance application, we have relied on our experience with decisions of the Board on our applications to outline our recommendations. We assume that full compliance to 521 CMR, without the benefit of any variance requests, would at least double this conceptual budget to a cost of $1.5 million.

We understand that the cost of accessibility improvements for an existing building can be somewhat daunting upon first review. We welcome the opportunity to discuss the scope of recommended work and the logic of intended variance requests to clarify the components of this study report.

ATTACHMENTS
• PLAN DRAWINGS (12 pages)
• CAPTIONED PHOTOS (18 pages)
• ITEMIZED BUDGET (1 page)
A-00  LIST OF DRAWINGS
A-01  DRAWING LEGEND

A-1.0  FIRST FLOOR – EXISTING CONDITIONS
A-1.1  FIRST FLOOR – ACCESSIBILITY UPGRADES

A-2.0  SECOND FLOOR – EXISTING CONDITIONS
A-2.1  SECOND FLOOR – ACCESSIBILITY UPGRADES

A-3.0  THIRD FLOOR – EXISTING CONDITIONS
A-3.1  THIRD FLOOR – ACCESSIBILITY UPGRADES

A-4.0  FIRST FLOOR – EXISTING BACK STAIR
A-4.1  FIRST FLOOR – BACK STAIR UPGRADES

A-5.0  SECOND FLOOR – EXISTING BACK ENTRANCE
A-5.1  SECOND FLOOR – BACK ENTRANCE UPGRADES
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<tr>
<th>ITEM</th>
<th>EXISTING CONDITIONS</th>
<th>ACCESS UPGRADES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hardware is a Knobset; Other Issues Are Accessible (Width &amp; Clearances)</td>
<td>Change Hardware to Lever Set (No Other Changes)</td>
</tr>
<tr>
<td>2</td>
<td>Knobset &amp; Clearance Issues (Maneuverability Inaccessible)</td>
<td>Change to Lever; Improve Clearances for Compliance with Maneuverability</td>
</tr>
<tr>
<td>3</td>
<td>Non-Accessible Public Door (Knobset and/or Maneuverability Issues)</td>
<td>Seek Variance per Narrative</td>
</tr>
<tr>
<td>5</td>
<td>Door for Staff Use Only</td>
<td>Accessibility Not Mandated</td>
</tr>
<tr>
<td>6</td>
<td>Public Door But Staff Controlled</td>
<td>Seek Variance per Narrative</td>
</tr>
<tr>
<td>7</td>
<td>Door Threshold Not Accessible</td>
<td>Refer to Narrative</td>
</tr>
</tbody>
</table>

**E#** Entrance Designation

**DF** Accessible Drinking Fountain

**DX** Inaccessible Drinking Fountain

**K#** Kitchen

**L#** Floor Level Designations

**S#** Sink & Counter Areas

**X#** Exit Designation

**NOTES:**

1) At the time of the study, renovation of the first and second floor public toilet rooms were just starting construction and have been shown as "existing" though the work had not yet been completed.

2) Renovation or repair of the existing dining room second exit via the existing areaway at the exit drive is not recommended as had been previously noted under a separate study (see narrative).
CARYL COMMUNITY CENTER
ACCESSIBILITY IMPROVEMENTS STUDY
4 SPRINGDALE AVENUE / DOVER MA

PROJECT: CARYL COMMUNITY CENTER
ACCESSIBILITY IMPROVEMENTS STUDY
4 SPRINGDALE AVENUE / DOVER MA

MILLS WHITAKER ARCHITECTS, LLC
P.O. Box 750089
Arlington MA 02475

DATE: JUNE 2016

DRAWING: FIRST FLOOR - EXISTING CONDITIONS
REMOVE STAIRS UP FROM GYM TO FIRST FLOOR (8R)

REMOVE PORTION OF CONC. SLAB FOR ELEVATOR

REMOVE FORMER SHOWERS

BUILDING STORAGE

STORAGE

STAIR

BACK STAIR

U

U

L-1

L-0

GYM

COA

COA

COA

COA

0' 4' 8' 16'

CARYL COMMUNITY CENTER
ACCESSIBILITY IMPROVEMENTS STUDY
4 SPRINGDALE AVENUE / DOVER MA

PROJECT: MILLS WHITAKER ARCHITECTS, LLC
P.O. Box 750089
Arlington MA 02475

DATE: JUNE 2016

DRAWING: FIRST FLOOR - EXISTING BACK STAIR
NOTE: LU/LA = "LIMITED USE / LIMITED APPLICATION" ELEVATOR
CREATE OPENING IN FLOOR FOR ELEVATOR

CLASSROOM #217
NOTE: LU/LA = "LIMITED USE / LIMITED APPLICATION" ELEVATOR

PROJECT: CARYL COMMUNITY CENTER
ACCESSIBILITY IMPROVEMENTS STUDY
4 SPRINGDALE AVENUE / DOVER MA

MILLS WHITAKER ARCHITECTS, LLC
P.O. Box 750089
Arlington MA 02475

DRAWING: SECOND FLOOR - BACK ENTRANCE UPGRADES
DATE: JUNE 2016

A-5.1
Typical Sink and Counter Area in Pre-School Classroom Not Accessible (Knee Space; Counter Ht; Sink Depth)

Sink and Counter in Pre-School Hallway Not Accessible (Knee Space and Sink Depth)

No Knee Space and Insufficient Clearance Width at Council on Aging Lavatory in Counter Area

Bleachers in Dining Room - No Rails & Guards
Inaccessible Second Exit from Dining Area Leads to Deteriorated Exterior Areaway

Locked Doorway to Blue Room Could Serve as Accessible Second Exit from Dining Room if Modified to be Double Egress Opening

Exit from Blue Room to Dining Does Not Allow Exit from Dining Room into Blue Room

Exit from Blue Room Direct to Exterior; Non-Illuminated Exit Sign; Steeply Sloping Walkway Beyond
Two Street Parking Spaces Marked Accessible But Not Compliant with Regulations

Curb Cut at Street to Front Walkway Serving as Driveway to Accessible Parking Spaces at Front Entrance

Accessible Parking Space to Left of Entrance

Accessible Parking Space Adjacent to Front Entrance; Both Spaces at Entry Creates Pedestrian Hazard
Drain at Front Walkway in Steeply Sloping Portion of Walk; Requires Re-grading or Construction of Ramp with Rails

Front Door Entrance with Accessible Lever Handle

Steeply Sloping Walk at Blue Room Exit

East Stair Exit to Side Yard at Centre Street
Redundant Exit from S.W. Corner CDC Classroom

Dining Room Exit Shed Enclosure at Driveway

Side Entrance Roof Canopy at Stairs Down to First Floor

Door at Side Entrance Not Accessible Due to Limited Pull Side Clearance and Step Up at Door
Canopy Cover at Service Stair to Boiler Room (Left); Redundant Exit Stair Beyond at Dance Studio with Required Gym Stair Below at Driveway

Back Entrance with Stoop and Landing

Step Up at Back Entrance Door

Back Entrance Arrives at Intermediate Stair Landing
Typical Corridor Paired Opening with Magnetic Hold-Open Devices

Typical Paired Opening with Knob Set at Active Leaf & No Pull at Passive Leaf

Deep Recess in Masonry Wall at Doorway into COA’s Blue Room on First Floor

Deep Recess in Masonry Wall at Doorway into Classroom at Second Floor (above Blue Room)
Lever Handle on Door with Furniture Obstruction on Push Side of Door & Set > 6” from Wall Plane

Limited Push Side Clearance at Door to Hallway

Typical Knob Set Hardware

Limited Pull Side Clearance at Door into Activity Area
Furniture Obstruction Within 18” of Pull Side at Door

Raised Threshold into Gym from Back Stairway

Step at Areaway Exit from Gym

Threshold Gap and Step Down at Gym Exit
521 CMR 27: STAIRS

Dual Handrails at Central Stair

Guardrail at Opposite Wall of Central Stair

Single Handrail at CDC (East) Stairway

Dual Handrails with Deteriorated Joinery
521 CMR 27: STAIRS

Guardrail at Library Mezzanine Stairway

Landing at Library Mezzanine Stairway
Requires Headroom Protection (Cane Guard)

Dual Handrails at Exterior Areaway to Side Entrance
Unnecessary Exit Stair from Erin's Dance Studio
Above Needed Gym Stairway Below

Gym Stair with Incomplete Railing Extensions

Incomplete Railing Extension at Gym Exit Areaway

Opposite Side of Gym Exit Areaway Stair
Passenger Elevator with Hall Call Button

Handrails in Passenger Elevator Cab Mounted 4” Higher Than Currently Mandated

Cab Call Buttons Not in Compliance

Detail of Cab Call Buttons and Emergency Notifications
Jamb Markings at Elevator Frame

Entrance Landing Level at Back Door; Proposed LU/LA at Wall Beyond

Lower Run of Back Stairs to be Rebuilt; LU/LA to be at Wall Beyond

Rebuild Lower Run of Back Stair to Provide Access to Gym via LU/LA
Proposed LU/LA Location at First Floor

Second Floor Landing in Back Stair

Library Area with Mezzanine Above

Library Level with Mezzanine Above; Proposed Location of Vertical Wheelchair Lift
521 CMR 30: PUBLIC TOILET ROOMS

Single User Non-Accessible Toilet Room (1 of 4)

521 CMR 31: KITCHENS

Conference Room Kitchenette for Staff Use Only

521 CMR 31: KITCHENS

Lever Handles and Gooseneck Faucet at Conference Room Kitchenette

521 CMR 31: KITCHENS

Dining Room Kitchen Serving Area
Serving Counter at Dining Room Kitchen
Hand-Washing Sink and Convection Oven
Dishwashing Station at Dining Room Kitchen
Residential Refrigerator & Range at Dining Room Kitchen
Inaccessible Drinking Fountain in Hallway

Accessible Drinking Fountain, but in an Inaccessible Recess in Wall (<30" Wide)

Accessible Drinking Fountain, But Protruding >4” Into Accessible Route, Creating an Egress Hazard

Accessible Drinking Fountain at Dining Room
## Caryl Community Center - Accessibility Study Conceptual Budget

### Project Components by Division

<table>
<thead>
<tr>
<th>Division</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>01 General Requirements</strong></td>
<td>40,000</td>
</tr>
<tr>
<td>supervision, temporary facilities, project management</td>
<td></td>
</tr>
<tr>
<td><strong>02 Demolition</strong></td>
<td>14,250</td>
</tr>
<tr>
<td>remove portions of walls, fixtures, ceilings, asbestos, floor slabs &amp; framing, redundant exits</td>
<td></td>
</tr>
<tr>
<td><strong>03 Concrete</strong></td>
<td>12,500</td>
</tr>
<tr>
<td>saw-cutting of slab, foundation/pit for elevator, reinforced stem walls, stair pans, patching</td>
<td></td>
</tr>
<tr>
<td><strong>04 Masonry</strong></td>
<td>22,000</td>
</tr>
<tr>
<td>infill exterior walls at removal of redundant exit doors</td>
<td></td>
</tr>
<tr>
<td><strong>05 Metals</strong></td>
<td>41,675</td>
</tr>
<tr>
<td>accessible counter supports, framing elevator walls &amp; floors, ramp/stair railings, 8-riser stair run</td>
<td></td>
</tr>
<tr>
<td><strong>06 Wood &amp; Plastics</strong></td>
<td>13,500</td>
</tr>
<tr>
<td>counters, framing, blocking, miscellaneous carpentry</td>
<td></td>
</tr>
<tr>
<td><strong>07 Thermal &amp; Moisture</strong></td>
<td>8,000</td>
</tr>
<tr>
<td>waterproofing, sealants, roofing for elevator vent</td>
<td></td>
</tr>
<tr>
<td><strong>08 Openings</strong></td>
<td>65,500</td>
</tr>
<tr>
<td>hardware modifications, window infills at removal of redundant exit doors</td>
<td></td>
</tr>
<tr>
<td><strong>09 Finishes</strong></td>
<td>27,500</td>
</tr>
<tr>
<td>patching, gypsum wallboard, patch flooring, infill base, acoustical tile</td>
<td></td>
</tr>
<tr>
<td><strong>10 Specialties</strong></td>
<td>1,500</td>
</tr>
<tr>
<td>supplemental signage at interior, accessible parking signage</td>
<td></td>
</tr>
<tr>
<td><strong>11 Equipment</strong></td>
<td>3,000</td>
</tr>
<tr>
<td>limited foodservice equipment at dining room kitchen</td>
<td></td>
</tr>
<tr>
<td><strong>14 Conveying Equipment</strong></td>
<td>65,000</td>
</tr>
<tr>
<td>LU/LA elevator (4-stops); vertical wheelchair lift to mezzanine; upgrades to existing passenger elevator</td>
<td></td>
</tr>
<tr>
<td><strong>22 Plumbing</strong></td>
<td>10,050</td>
</tr>
<tr>
<td>accessible sinks at classroom and meeting rooms, accessible hand-washing sink piping in kitchen</td>
<td></td>
</tr>
<tr>
<td><strong>23 HVAC</strong></td>
<td>8,500</td>
</tr>
<tr>
<td>elevator hoistway venting, heating modifications in back stairway, piping modifications where needed</td>
<td></td>
</tr>
<tr>
<td><strong>26 Electrical</strong></td>
<td>114,725</td>
</tr>
<tr>
<td>replace fire alarm system, elevator power, modify switch heights, GFIs at lavatories, exit signs</td>
<td></td>
</tr>
<tr>
<td><strong>32 Exterior Improvements</strong></td>
<td>50,000</td>
</tr>
<tr>
<td>front walk/Blue Room exit, back entry ramp/stoop, accessible parking; infill dining areaway; play path</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal of Conceptual Construction Costs</strong></td>
<td>497,700</td>
</tr>
<tr>
<td>Bonds, Insur., OH+P (10%)</td>
<td>49,770</td>
</tr>
<tr>
<td>Pricing Contingency (10%)</td>
<td>49,770</td>
</tr>
<tr>
<td>Escalation Allowance (3%)</td>
<td>17,917</td>
</tr>
<tr>
<td>Conceptual Construction Budget</td>
<td>615,157</td>
</tr>
</tbody>
</table>

### Arch/Engr Allowance (15%) | 92,274
### Construction Contingency + Project Expenses (7.5%) | 46,137
### Conceptual Project Cost | 753,568

## NOTES:

1. Refer to accessibility study narrative, drawings & photos prepared by Mills Whitaker Architects.
2. Costs indicated are very preliminary and may be higher or lower than indicated.
3. Project scope for accessibility should be combined with pending HVAC upgrade project.
4. Costs incorporate Dining Room exit modifications previously described in 22 Oct 2015 budget.
5. Costs do not include general renovations to corridors and mezzanine level beyond accessibility.