

TOWN OF GROTON, MASSACHUSETTS

SENIOR CENTER FEASIBILITY STUDY



Courtesy of Town of Groton Website

FINAL STUDY REPORT

October 3, 2016

I. SPACE NEEDS ANALYSIS

- A. First Draft, May 24, 2016
- B. Final Draft, June 14, 2016

II. BUILDING ASSESSMENT REPORTS

- A. Existing Conditions Groton Country Club
 - 1. Architectural Evaluation
 - 2. Mechanical Evaluation
 - 3. Electrical Evaluation
 - 4. Estimates of Probable Costs
- B. Existing Conditions Prescott School
 - 1. Architectural Evaluation
 - 2. Mechanical Evaluation
 - 3. Electrical Evaluation
 - 4. Estimates of Probable Costs
- C. Existing Conditions Existing Groton Senior Center
 - 1. Architectural Evaluation
 - 2. Mechanical Evaluation
 - 3. Electrical Evaluation
 - 4. Estimates of Probable Costs

III. SITE AND BUILDING ANALYSIS

- A. **Evaluation Methodology**
- B. **Groton Country Club**
 - 1. Site/Builder evaluation Narrative
 - 2. Evaluation Matrix
- C. **Prescott School**
 - 1. Site/Builder evaluation Narrative
 - 2. Evaluation Matrix

III. SITE AND BUILDING ANALYSIS (Cont.)**D. Existing Groton Senior Center**

1. Site/Builder evaluation Narrative
2. Evaluation Matrix

E. Summary

1. Summary Narrative
2. Summary Evaluation Matrix

IV. PRELIMINARY DESIGN OPTIONS**A. Renovation and Addition to Existing Senior Center**

1. Preliminary Site Plan
2. Preliminary Floor Plans
3. Preliminary Building Elevations

B. Construct New Senior Center Construction

1. Preliminary Site Plan
2. Preliminary Floor Plan
3. Preliminary Building Elevations

V. PROJECT BUDGET STATEMENTS**A. Concept Budget Statement of Project Costs**

1. Repair/ Renovation and Addition to Existing Senior Center
2. Construct New Senior Center Construction

VI. PROJECT SCHEDULE**A. Prospective Project Schedule****VII. SUMMARY RECOMMENDATION****A. Summary Recommendation**

VIII. APPENDIX

A. Request for Proposals

1. Feasibility, Schematic Plans, Site Assessment and Cost Estimates
Senior Center, Town of Groton

GROTON SENIOR CENTER
GROTON, MA

SPACE NEEDS ANALYSIS



A. FIRST DRAFT: MAY 24, 2016

B. FINAL DRAFT: JUNE 14, 2016

SPATIAL NEEDS ANALYSIS

PROGRAM SUMMARY

1. Public

a. Vestibule	80 NSF
b. Lobby/ Entry Way	120 NSF
c. Lobby/ Waiting and Lounge	140 NSF

Subtotal Public: **340 NSF**

2. Administration

a. Reception	120 NSF
b. Director's Office	130 NSF
c. Activities Program Coordinator	110 NSF
d. Outreach Coordinator	110 NSF

Subtotal Administration: **470 NSF**

3. Activity

a. Dining/ Multipurpose Great Room	2,700 NSF
b. Dining/ Great Room Storage	280 NSF
c. Multi-Purpose Classroom	480 NSF
d. Fitness Room	1,400 NSF
e. Fitness Storage Room	100 NSF
f. Exercise Equipment Area	320 NSF
g. Billiards Room	760 NSF
h. Arts and Crafts Room	760 NSF

Subtotal Activity: **6,800 NSF**

4. Services

a. Kitchen	690 NSF
b. Pantry/ Dry Goods Storage	120 NSF
c. Dishwashing	110 NSF
e. Restrooms	700 NSF

Subtotal Service: **1,620 NSF**

5. Utility

a. Custodial/ Maintenance/ Laundry	80 NSF
b. General/ Bulk Storage	360 NSF
c. Emergency Shelter Supply/ Storage	260 NSF
d. Mechanical/ HVAC Equipment Room	220 NSF
e. Sprinkler Room	80 NSF
f. Electrical Room	100 NSF
g. Communications/ Data Room	60 NSF

Subtotal Utility:	1,160 NSF
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Sub-Total Space Needs Assessment:	10,390 NSF
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Add 25% Net to Gross Factor for walls, structure and circulation:	<u>+ 2,600</u>
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GROSS ESTIMATED SPACE NEEDS:	12,990 Gross Sq. Ft.
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6. Site

- | | |
|---------------------------|--------------|
| a. Exterior Site Features | 2 to 3 Acres |
|---------------------------|--------------|

7. Deficiencies

- a. NSF: Net Square Foot

Area of space or room measured at inside wall surfaces of each perimeter wall, exclusive of wall construction, structural elements and circulation area (Hall and Corridors) connecting areas or room.

- b. GSF: Gross Square Foot

The area of a building measures at exterior wall surfaces of each exterior wall, inclusive of wall construction, structural elements and circulation area (Hall and Corridors) connecting areas or room

First Draft: May 24, 2016**1. PUBLIC****a. Vestibule 80 NSF**

1. Main Primary Entrance and Airlock
2. Handicap Accessible
3. Glazed Walls and Doors for Viewing through Vestibule
4. Six (6) Ft., Automatic Doors Preferred
5. Walk-Off Mat Flooring
6. Adjacent to Lobby/ Entry Way
7. Approximate Existing S.F. Area: None

b. Lobby/ Entry Way 160 NSF

1. Circulation and Orientation Space
2. First Impression of Space should be welcoming/ warm and open
3. Provide view to Reception, Café, Waiting and Exterior
4. Informational Display Wall Area/ Touch Screen TV Monitor and Message Display
5. Directory and Signage/Displays
6. Provide Built-In (Library) Book and periodicals visible from Reception
7. Adjacent to Vestibule and Lobby Waiting
8. Adjacent to Reception
9. Proximity with line of sight to Café
10. Approximate Existing S.F. Area: 160 S.F.

c. Lobby/ Waiting And Lounge Area 220 NSF

1. Informal Waiting and Socialization Area
2. Open Waiting Area
3. Comfortable Seating for 4-8 Maximum
4. Visually Separate Seating Area with Low Wall Enclosures
5. Overflow Café Seating
6. Possible Fireplace and Hearth
7. Optional TV/ CATV Monitor
8. Possible Consignment Art on Walls
9. Open to Lobby Entry Way
10. Provide direct views to exterior and entrance
11. Provide views to and from Reception
12. Adjacent to Lobby/ Entry Way and Vestibule
13. Adjacent and Open to Café
14. Proximity to Restrooms
15. Approximate Existing S.F. Area: None

d. Café 180 NSF

1. Self-Serve Coffee and Nutritional Snack Area
2. Light Brunch/ Lunch Menu
3. Open/ Informal Socialization Space
4. Table Seating for approximately 6 to 8 at three (3) Tables
5. Tables to be waitressed and bussed (Option)
6. Counter space for Coffee/ Tea Carafes and/or Specialty Items
7. Wireless Internet Access for Cyber-Café
8. Views to Lobby/ Entryway and Lobby/Waiting
9. Exterior views and daylighting
10. Possible exterior Terrace with Seasonal Seating and Landscaping
11. Provide views to and from reception
12. Adjacent and open to Lobby/ Waiting
13. Provide views to and from Reception for overflow Café seating
14. Proximity to Kitchen
15. Approximate Existing S.F. Area: None

2. ADMINISTRATION**a. Reception 160 NSF**

1. Information Counter and Receptionist Workstation (1)
2. Open Multi-Use Office/ Administration Area
3. Volunteer/ Administrative Workstation (1)
4. Sign-In Ledger
5. Computer/ printer
6. Telephone/ Data/ Fax
7. File Storage
8. Handicap Accessible Counter
9. Display and Event Signage
10. Pamphlet Rack
11. Direct views to Vestibule, Lobby/ Entryway, Lobby/ Waiting and Cafe
12. Maximize all other views
13. Adjacent and views to Director's Office
14. Adjacent to Copy/ Supply Alcove
15. Adjacent to Lobby/ Entryway
16. Proximity to Lobby/ Waiting
17. Approximate Existing S.F. Area: 150 S.F.

b. Director's Office 200 NSF

1. Private/ Secure Office and Work space
2. Large desk/ workstation and chair
3. File Cabinets (3)
4. Small Meeting table and comfortable seating (4 to 6)
5. Exterior operable windows and natural light
6. Computer/ Printer/ Telephone/ Data/ CATV
7. Adjacent with views to Reception/Administration area
8. Adjacent to other Administrative Offices
9. Approximate Existing S.F. Area: 130 S.F.

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- c. Activities Program Coordinator 120 NSF**
1. Private/ Secure Office and Workspace
 2. One Workstation and chair
 3. Two Visitor's chair
 4. File Cabinets (2)
 5. Bookshelf
 6. Exterior operable windows and daylight preferred
 7. Adjacent to Reception/ Administration Area
 8. Computer/ Telephone/ Data
 9. Approximate Existing S.F. Area: 110 S.F.
- d. Outreach Coordinator 130 NSF**
1. Private/ Secure Office and Workspace
 2. Private Meeting Space
 2. One Workstation and chair
 3. Two Visitor's chairs
 4. File Cabinets (3)
 5. Bookshelf
 6. Exterior operable windows and daylight preferred
 7. Adjacent to Reception/ Administration Area
 8. Computer/ Telephone/ Data
 9. Approximate Existing S.F. Area: 110 S.F.
- e. Multipurpose Office and Meeting Room 200 NSF**
1. Overflow Office and Workspace
 2. Temporary Meeting Space and Future Shared Office Space
 3. Temporary space for Veteran's Agent, SHINE, Health, Tax Preparer, etc.
 4. One Workstation and chair
 5. Small Meeting Table and Comfortable Seating (4)
 6. Three Visitor's chairs
 7. File Cabinets: 2
 8. Bookshelf
 9. Proximate to Reception/ Administrative Area
 10. Computer/ Telephone/ Data
 11. Approximate Existing S.F. Area: None
- f. Copy/ Supply Cove 60 NSF**
1. Copier/ Printer (1) Equipment Room
 2. Copier/ Office Supplies in closed cabinetry
 3. Small Counter Space
 4. Mail Slots
 5. Adjacent to Reception/ Administration Area
 6. Approximate Existing S.F. Area: 40 S.F.

3. ACTIVITY**a. Dining/ Multipurpose Great Room 3,700 NSF**

1. Dining and Multi-Purpose Event Space
2. Three (3) Segregated/ Divisible Activity Areas
3. Groton's Emergency Shelter Area
4. Tabled seating for approximately (100-150) Diners at (20) tables
5. Table size for (6) to (7) diners
6. Adjacent segregated serves as overflow Dining space
7. Multi-Purpose Event and Assembly Space, Special Events, etc.
8. Maximum seating of (200) for Town or Senior Center Events
9. Larger Game and Club space for cards, dominos, etc.
10. Exercise by walking around room perimeter
11. Great Room with 16 ft. to 18 ft. ceiling height
12. Well Daylit with natural light and window treatments/ light control
13. AV/ Movie projector/ Screen suitable for (1) or (2) or (3) Activity areas
14. Audio/ Sound System
15. Acoustical treatment and control
16. Foyer area for ticket sales and event table
17. Recessed/ Built-In Coat Rack areas
18. Temporary or mobile Staging with Accessible Ramp
19. Dining and Activity space and Great Room separated by Operable Partitions
20. Adjacent to Storage Room
21. Adjacent to Kitchen
22. Adjacent to Dishwashing
23. Proximate and access to Large delivery doors
24. Proximity to Restrooms
25. Approximate Existing S.F. Area: 1,350 S.F. Shared

b. Dining/ Great Room Storage 280 NSF

1. Furniture and Equipment Storage Room
2. Adjacent to Dining/ Multipurpose Great Room
3. Table/ Chair storage Carts

c. Multi-Purpose Classroom 480 NSF

1. Multi-Purpose Classroom/ Instructional Space
2. Conference and Meeting Space
3. Multipurpose Game Space, Cards, Dominos, etc.
4. Seating for 16 to 20, or tabled seating for 10 to 16
5. Flexible table layout for Classroom, Lectures or Meetings
6. Club and Group Meeting space
7. Ceiling Mounted Projector and Retractable Projection Screen
8. Teaching/ Display wall
9. Variable Multi-Purpose Lighting Controls
10. Exterior operable windows and Natural light
11. Daylight control and Window treatments
12. Wi-Fi/ Data/ AV/ CATV
13. Wall Mounted TV monitor
14. Acoustically separate space
15. Coat rack
16. Carpet tile flooring
17. Storage cabinets and counter
18. Proximity to Restrooms
19. Approximate Existing S.F. Area: None.

d. Fitness Room 1,400 NSF

1. Large Fitness Space and Activity for +/- 30 participants
2. Aerobic and Fitness classes, Zumba, Dance, Tia-Chi, Strength Training, etc.
3. 10 ft. to 14 ft. Ceiling height
4. Durable and Abuse resistant surfaces
5. Mirrored Wall with Dance Bar
6. Well Daylit with Natural light
7. Acoustical treatments and control
8. Countertop/ Sign-In Counter
9. Variable Lighting Controls
10. Overhead mounted TRX Hooks (Optional)
11. Coat Rack and open- cubbies for personal property
12. Adjacent to Fitness Storage Room
13. Proximity to Exercise Equipment Room
14. Proximity to electric water cooler with bottle filler
15. Approximate Existing S.F. Area: 1,150 S.F. Shared

e. Fitness Storage Room 100 NSF

1. Equipment and Fitness Accessory Storage Room
2. Adjacent to Fitness Room.

f. Exercise Equipment Area 320 NSF

1. Personal Exercise and Equipment Training Room
2. Two (2) Treadmills
3. Two (2) Recumbent Bicycle Machines
4. One (1) Elliptical Stair Machine
5. Small Free weight area with (2) racks
6. Mirrored wall
7. 9 ft. to 10 ft. Ceiling height
8. Sign-In Counter
9. Seating and Resting area with 2 to 4 seats
10. Coat rack and open cubbies for personal property
11. Standing weight scale
12. Well Daylit with Natural light
13. Adjacent Storage closet for parts/ supplies at 20 NSF
14. Proximity to Fitness Room
15. Proximity to electric water cooler with bottle filler
16. Approximate Existing S.F. Area: None.

g. Billiards Room 760 NSF

1. Recreational and Competitive Pool Room
2. Two (2) full-size Pool Tables
3. One (1) Ping Pong Table
4. One (1) Pool Table to be H.C. Accessible
5. Tables and Seating for four (4) Seats and (6) Stools
6. Chair rail with Bar shelf
7. Wall Rack/ Stick Space
8. Storage Closet at 10 NSF
9. Coat Rack
10. TV Wall Monitor/ CATV
11. Approximate Existing S.F. Area: None.

h. Arts and Crafts Room 760 NSF

1. Multi-Purpose Studio Space for Wet and Dry Artistic Crafts
2. Tabled seating for approximately (24) to (30) participants
3. Arts Studio for Painting, Drawing, etc.
4. Window/ Skylit Greenhouse for yearlong gardening
5. Ceramic/ Pottery Studio
6. Large multi-use Sink with integral counter
7. Wall cabinets and countertop
8. Display wall
9. Exterior operable Window and Natural light
10. Floor outlets for power craft accessories
11. Coat Rack
12. Easy maintainable flooring
13. Adjacent Storage and Supply room at 60 NSF
14. Approximate Existing S.F. Area: None

4. SERVICES**a. Kitchen 900 NSF**

1. Meal Preparation space for 50 to 150 Diners
2. Full-Service Kitchen/ Non-Cafeteria style
3. Food prep for Meals-On-Wheels
4. Kitchen and Food Prep during Emergency Shelter
5. Partially open to Dining Room for visibility/ surveillance
6. Kitchen Equipment to include:

Convection Ovens	Standard Ovens
Flat-top Griddle	Six- Burner Stove
3-Part Pot Sink and Filler	Mixer on stand
Very Large Prep Table	Food Prep Sink/Counter
Coffee Urn	Ice Machine
Handsink	Microwave
Two-Door Reach-In Refrigerators	Toaster/Miscellaneous Small Appliances
	Three-Door Reach-In Freezers
7. Instant Hot Water tap near Stove
8. Garbage Disposal at Food Prep Sink
9. Dessert Table
10. Self-Serve Tea/ Coffee/ Carafes at Open Counter
11. Pot/Pan and Cookware storage
12. Placeware/ Serviceware storage for 150 in Cabinets and/or Cart Storage
13. Pantry/ Dry Food Storage Room at 220 NSF
14. Desk/ Workstation area with File Cabinet
15. Coat Rack and open cubbies for personal property
16. Natural Gas Service
17. Adjacent to Dining Room
18. Adjacent to Dishwashing Area
19. Proximity to Café
20. Proximity to Lobby/ Entry Way
21. Proximity to Service Entrance and exterior dumpster
22. Approximate Existing S.F. Area: 220 S.F.

b. Pantry/ Dry Goods Storage 120 NSF

1. Storage Area for prepackaged food/ ingredients
2. Adjacent to Kitchen
3. Proximity to Service/ Delivery Entrance
4. Steel shelving units

c. Dishwashing **160 NSF**

1. Collection and Cleaning of Cookware and Serviceware
2. Eight (8) ft. drop-off Counter area
3. Automatic/ Commercial Dishwasher
4. Cool down/ Drying counter
5. Serviceware cart Storage
6. Wide entry for carts
7. Adjacent to Dining Room
8. Adjacent to Kitchen
9. Proximity to Café
10. Approximate Existing S.F. Area: None

d. Give and Take Shop **60 NSF**

1. Small Retail Space
2. Small Give and Take Thrift Space
3. Assorted merchandise for Seniors
4. Remote location acceptable
5. Approximate Existing S.F. Area: 10 S.F.

e. Restrooms **700 NSF**

1. Two (2) single occupancy Restrooms (M/F) at 50 NSF each near Lobby
2. One (1) Unisex/ Companion type Restroom at 80 NSF with Shower
3. Central/ Primary M/ F Restrooms with multiple fixtures and stalls
4. Total Dedicated (Non-Unisex) Fixtures based on 220 max. occupancy and 40/60 (M/F)

 Women's Toilets: Six (6) Min.
 Men's Toilets: Three (3) and Two (2) Urinals Min.
 Women's Lavatories: Four (4) Min.
 Men's Lavatories: Three (3) Min.
5. Emergency Shelter shower at Companion Restroom
6. All Restrooms to be Handicap Accessible
7. Auto-flush toilets/ urinals
8. Floor drains
9. Paper towel dispensers preferred
10. Sanitary wall and floor finishes
11. Limit maximum distance to any Restroom to approximately 120-160 ft.
12. Proximity to Dining
13. Proximity to Custodial/Maintenance
14. Approximate Existing S.F. Area: 560 S.F.

5. UTILITY**a. Custodial/Maintenance 80 NSF**

1. Janitorial/ Custodial Work Room
2. Janitorial Cleaning equipment and supplies
3. Miscellaneous Storage Space
4. Utility Sink and/or Mop Sink
5. Washer/ Dryer with vent
5. Emergency Eye Wash
7. Proximity to Kitchen and Dining
8. Proximity to Restrooms
9. Option to Combine space with larger Mechanical Utility space
10. Approximate Existing S.F. Area: 50 S.F.

b. General/ Bulk Storage 360 NSF

1. Bulk and Miscellaneous Storage space
2. Supply Storage
3. Seasonal Storage
4. Storage Shelving
5. Proximity to Service and Delivery entrance
6. Approximate Existing S.F. Area: 360 S.F. Shared/ various areas

c. Emergency Shelter Supply/ Storage 260 NSF

1. Bulk Storage for Emergency shelter supplies, cots, blankets, portable kennels, etc.
2. Storage Shelving

d. Mechanical/HVAC Equipment Room 220 NSF

1. Mechanical Heating/ Ventilation and A/C Equipment and Controls
2. Domestic Hot Water System
3. Natural Gas Equipment preferred
4. Remote Rooftop or Attic Air Handling Units
5. Acoustically separate space
6. Exterior Ventilation through wall or roof
7. Floor drain
8. Option to Combine space with Custodial/ Maintenance
9. Option to Combine space with Sprinkler Room
10. Adjacent to Water entrance and Sprinkler Room
11. Proximity to mid-point of Building preferred
12. Approximate Existing S.F. Area: 140 S.F.

e. Sprinkler Room 80 NSF

1. Main Sprinkler distribution piping, valves, controls and alarms
2. Water Utility Entrance
3. Floor drain
4. Option to Combine space with Mechanical/ HVAC Equipment Room
5. Proximity to mid-point of Building
6. Approximate Existing S.F. Area: 80 S.F.

f. Electrical Room 100 NSF

1. Primary Electrical service equipment and Distribution panels
2. Emergency Generator transfer switch
3. Adjacent to Electrical Service entrance
4. Proximity to midpoint of Building preferred
5. Approximate Existing S.F. Area: None/ various areas

g. Communications/Data Room 60 NSF

1. Telephone and Data Services entrance/demark
2. Telephone equipment/backboard
3. Data equipment/backboard, racks and I.T. Server
4. Cable T.V. equipment/backboard
5. Entire Building and Patio to have Wi-Fi Service
6. CCTV equipment and recorder
7. Dedicated 24/7 air conditioning system
8. Proximity to mid-point of Building preferred
9. Approximate Existing S.F. Area: None/ various areas

6. UTILITY**a. Exterior Site Features 2 to 3 Acres**

Final Draft: June 14, 2016**1. PUBLIC****a. Vestibule 80 NSF**

1. Main Primary Entrance and Airlock
2. Handicap Accessible
3. Glazed Walls and Doors for Viewing through Vestibule
4. Six (6) Ft., Automatic Doors Preferred
5. Walk-Off Mat Flooring
6. Adjacent to Lobby/ Entry Way
7. Approximate Existing S.F. Area: None

b. Lobby/ Entry Way 120 NSF

1. Circulation and Orientation Space
2. First Impression of Space should be welcoming/ warm and open
3. Provide view to Reception, Café, Waiting and Exterior
4. Informational Display Wall Area/ Touch Screen TV Monitor and Message Display
5. Directory and Signage/Displays
6. Provide Built-In (Library) Book and periodicals visible from Reception
7. Adjacent to Vestibule and Lobby Waiting
8. Adjacent to Reception
9. Proximity with line of sight to Café
10. Approximate Existing S.F. Area: 160 S.F.

c. Lobby/ Waiting And Lounge Area 140 NSF

1. Informal Waiting and Socialization Area
2. Open Waiting Area
3. Comfortable Seating for 4-8 Maximum
4. Visually Separate Seating Area with Low Wall Enclosures
5. Overflow Café Seating
6. Possible Fireplace and Hearth
7. Optional TV/ CATV Monitor
8. Possible Consignment Art on Walls
9. Open to Lobby Entry Way
10. Provide direct views to exterior and entrance
11. Provide views to and from Reception
12. Adjacent to Lobby/ Entry Way and Vestibule
13. Adjacent and Open to Café
14. Proximity to Restrooms
15. Approximate Existing S.F. Area: None

2. ADMINISTRATION**a. Reception 120 NSF**

1. Information Counter and Receptionist Workstation (1)
2. Open Multi-Use Office/ Administration Area
3. Volunteer/ Administrative Workstation (1)
4. Sign-In Ledger
5. Computer/ printer
6. Telephone/ Data/ Fax
7. Copier and Paper/ Toner Storage
8. File Storage
9. Handicap Accessible Counter
10. Display and Event Signage
11. Pamphlet Rack
12. Direct views to Vestibule, Lobby/ Entryway, Lobby/ Waiting and Cafe
13. Maximize all other views
14. Adjacent and views to Director's Office
15. Adjacent to Copy/ Supply Alcove
16. Adjacent to Lobby/ Entryway
17. Proximity to Lobby/ Waiting
18. Approximate Existing S.F. Area: 150 S.F.

b. Director's Office 130 NSF

1. Private/ Secure Office and Work space
2. Large desk/ workstation and chair
3. File Cabinets (3)
4. Small Meeting table and comfortable seating (4 to 6)
5. Exterior operable windows and natural light
6. Computer/ Printer/ Telephone/ Data/ CATV
7. Adjacent with views to Reception/Administration area
8. Adjacent to other Administrative Offices
9. Approximate Existing S.F. Area: 130 S.F.

c. Activities Program Coordinator 110 NSF

1. Private/ Secure Office and Workspace
2. One Workstation and chair
3. Two Visitor's chair
4. File Cabinets (2)
5. Bookshelf
6. Exterior operable windows and daylight preferred
7. Adjacent to Reception/ Administration Area
8. Computer/ Telephone/ Data
9. Approximate Existing S.F. Area: 110 S.F.

d. Outreach Coordinator 110 NSF

1. Private/ Secure Office and Workspace
2. Private Meeting Space
2. One Workstation and chair
3. Two Visitor's chairs
4. File Cabinets (3)
5. Bookshelf
6. Exterior operable windows and daylight preferred
7. Adjacent to Reception/ Administration Area
8. Computer/ Telephone/ Data
9. Approximate Existing S.F. Area: 110 S.F.

3. ACTIVITY**a. Dining/ Multipurpose Great Room 2,700 NSF**

1. Dining and Multi-Purpose Event Space
2. Three (3) Segregated/ Divisible Activity Areas
3. Groton's Emergency Shelter Area
4. Tabled seating for approximately (100-150) Diners at (20) tables
5. Table size for (6) to (7) diners
6. Adjacent segregated serves as overflow Dining space
7. Multi-Purpose Event and Assembly Space, Special Events, etc.
8. Maximum seating of (200) for Town or Senior Center Events
9. Larger Game and Club space for cards, dominos, etc.
10. Exercise by walking around room perimeter
11. Great Room with 16 ft. to 18 ft. ceiling height
12. Well Daylit with natural light and window treatments/ light control
13. AV/ Movie projector/ Screen suitable for (1) or (2) or (3) Activity areas
14. Audio/ Sound System
15. Acoustical treatment and control
16. Foyer area for ticket sales and event table
17. Recessed/ Built-In Coat Rack areas
18. Temporary or mobile Staging with Accessible Ramp
19. Dining and Activity space and Great Room separated by Operable Partitions
20. Adjacent to Storage Room
21. Adjacent to Kitchen
22. Adjacent to Dishwashing
23. Proximate and access to Large delivery doors
24. Proximity to Restrooms
25. Approximate Existing S.F. Area: 1,350 S.F. Shared

b. Dining/ Great Room Storage 280 NSF

1. Furniture and Equipment Storage Room
2. Adjacent to Dining/ Multipurpose Great Room
3. Table/ Chair storage Carts

c. Multi-Purpose Classroom 480 NSF

1. Multi-Purpose Classroom/ Instructional Space
2. Conference and Meeting Space
3. Multipurpose Game Space, Cards, Dominos, etc.
4. Seating for 16 to 20, or tabled seating for 10 to 16
5. Flexible table layout for Classroom, Lectures or Meetings
6. Club and Group Meeting space
7. Ceiling Mounted Projector and Retractable Projection Screen
8. Teaching/ Display wall
9. Variable Multi-Purpose Lighting Controls
10. Exterior operable windows and Natural light
11. Daylight control and Window treatments
12. Wi-Fi/ Data/ AV/ CATV
13. Wall Mounted TV monitor
14. Acoustically separate space
15. Coat rack
16. Carpet tile flooring
17. Storage cabinets and counter
18. Proximity to Restrooms
19. Approximate Existing S.F. Area: None.

d. Fitness Room 1,400 NSF

1. Large Fitness Space and Activity for +/- 30 participants
2. Aerobic and Fitness classes, Zumba, Dance, Tia-Chi, Strength Training, etc.
3. 10 ft. to 14 ft. Ceiling height
4. Durable and Abuse resistant surfaces
5. Mirrored Wall with Dance Bar
6. Well Daylit with Natural light
7. Acoustical treatments and control
8. Countertop/ Sign-In Counter
9. Variable Lighting Controls
10. Overhead mounted TRX Hooks (Optional)
11. Coat Rack and open- cubbies for personal property
12. Adjacent to Fitness Storage Room
13. Proximity to Exercise Equipment Room
14. Proximity to electric water cooler with bottle filler
15. Approximate Existing S.F. Area: 1,150 S.F. Shared

e. Fitness Storage Room 100 NSF

1. Equipment and Fitness Accessory Storage Room
2. Adjacent to Fitness Room.

f. Exercise Equipment Area 320 NSF

1. Personal Exercise and Equipment Training Room
2. Two (2) Treadmills
3. Two (2) Recumbent Bicycle Machines
4. One (1) Elliptical Stair Machine
5. Small Free weight area with (2) racks
6. Mirrored wall
7. 9 ft. to 10 ft. Ceiling height
8. Sign-In Counter
9. Seating and Resting area with 2 to 4 seats
10. Coat rack and open cubbies for personal property
11. Standing weight scale
12. Well Daylit with Natural light
13. Adjacent Storage closet for parts/ supplies at 20 NSF
14. Proximity to Fitness Room
15. Proximity to electric water cooler with bottle filler
16. Approximate Existing S.F. Area: None.

g. Billiards Room 760 NSF

1. Recreational and Competitive Pool Room
2. Two (2) full-size Pool Tables
3. One (1) Ping Pong Table
4. One (1) Pool Table to be H.C. Accessible
5. Tables and Seating for four (4) Seats and (6) Stools
6. Chair rail with Bar shelf
7. Wall Rack/ Stick Space
8. Storage Closet at 10 NSF
9. Coat Rack
10. TV Wall Monitor/ CATV
11. Approximate Existing S.F. Area: None.

h. Arts and Crafts Room 760 NSF

1. Multi-Purpose Studio Space for Wet and Dry Artistic Crafts
2. Tabled seating for approximately (24) to (30) participants
3. Arts Studio for Painting, Drawing, etc.
4. Window/ Skylit Greenhouse for yearlong gardening
5. Ceramic/ Pottery Studio
6. Large multi-use Sink with integral counter
7. Wall cabinets and countertop
8. Display wall
9. Exterior operable Window and Natural light
10. Floor outlets for power craft accessories
11. Coat Rack
12. Easy maintainable flooring
13. Adjacent Storage and Supply room at 60 NSF
14. Approximate Existing S.F. Area: None

4. SERVICES**a. Kitchen 690 NSF**

1. Meal Preparation space for 50 to 150 Diners
2. Full-Service Kitchen/ Non-Cafeteria style
3. Food prep for Meals-On-Wheels
4. Kitchen and Food Prep during Emergency Shelter
5. Program area for Cooking Classes
6. Partially open to Dining Room for visibility/ surveillance
7. Kitchen Equipment to include:

Convection Ovens	Standard Ovens
Flat-top Griddle	Six- Burner Stove
3-Part Pot Sink and Filler	Mixer on stand
Very Large Prep Table	Food Prep Sink/Counter
Coffee Urn	Ice Machine
Handsink	Microwave
Two-Door Reach-In Refrigerators	Toaster/Miscellaneous Small Appliances
	Three-Door Reach-In Freezers
8. Instant Hot Water tap near Stove
9. Garbage Disposal at Food Prep Sink
10. Dessert Table
11. Self-Serve Tea/ Coffee/ Carafes at Open Counter
12. Pot/Pan and Cookware storage
13. Placeware/ Serviceware storage for 150 in Cabinets and/or Cart Storage
14. Desk/ Workstation area with File Cabinet
15. Coat Rack and open cubbies for personal property
16. Natural Gas Service
17. Adjacent to Dining Room
18. Adjacent to Dishwashing Area
19. Proximity to Café
20. Proximity to Lobby/ Entry Way
21. Proximity to Service Entrance and exterior dumpster
22. Approximate Existing S.F. Area: 220 S.F.

b. Pantry/ Dry Goods Storage 120 NSF

1. Storage Area for prepackaged food/ ingredients
2. Adjacent to Kitchen
3. Proximity to Service/ Delivery Entrance
4. Steel shelving units

c. Dishwashing **110 NSF**

1. Collection and Cleaning of Cookware and Serviceware
2. Eight (8) ft. drop-off Counter area
3. Automatic/ Commercial Dishwasher
4. Cool down/ Drying counter
5. Serviceware cart Storage
6. Wide entry for carts
7. Adjacent to Dining Room
8. Adjacent to Kitchen
9. Proximity to Café
10. Approximate Existing S.F. Area: None

d. Restrooms **700 NSF**

1. Two (2) single occupancy Restrooms (M/F) at 50 NSF each near Lobby
2. One (1) Unisex/ Companion type Restroom at 80 NSF with Shower
3. Central/ Primary M/ F Restrooms with multiple fixtures and stalls
4. Total Dedicated (Non-Unisex) Fixtures based on 220 max. occupancy and 40/60 (M/F)

 Women's Toilets: Six (6) Min.
 Men's Toilets: Three (3) and Two (2) Urinals Min.
 Women's Lavatories: Four (4) Min.
 Men's Lavatories: Three (3) Min.
5. Emergency Shelter shower at Companion Restroom
6. All Restrooms to be Handicap Accessible
7. Auto-flush toilets/ urinals
8. Floor drains
9. Paper towel dispensers preferred
10. Sanitary wall and floor finishes
11. Limit maximum distance to any Restroom to approximately 120-160 ft.
12. Proximity to Dining
13. Proximity to Custodial/Maintenance
14. Approximate Existing S.F. Area: 560 S.F.

5. UTILITY**a. Custodial/Maintenance 80 NSF**

1. Janitorial/ Custodial Work Room
2. Janitorial Cleaning equipment and supplies
3. Miscellaneous Storage Space
4. Utility Sink and/or Mop Sink
5. Washer/ Dryer with vent
5. Emergency Eye Wash
7. Proximity to Kitchen and Dining
8. Proximity to Restrooms
9. Option to Combine space with larger Mechanical Utility space
10. Approximate Existing S.F. Area: 50 S.F.

b. General/ Bulk Storage 360 NSF

1. Bulk and Miscellaneous Storage space
2. Supply Storage
3. Seasonal Storage
4. Storage Shelving
5. Proximity to Service and Delivery entrance
6. Approximate Existing S.F. Area: 360 S.F. Shared/ various areas

c. Emergency Shelter Supply/ Storage 260 NSF

1. Bulk Storage for Emergency shelter supplies, cots, blankets, portable kennels, etc.
2. Storage Shelving

d. Mechanical/HVAC Equipment Room 220 NSF

1. Mechanical Heating/ Ventilation and A/C Equipment and Controls
2. Domestic Hot Water System
3. Natural Gas Equipment preferred
4. Remote Rooftop or Attic Air Handling Units
5. Acoustically separate space
6. Exterior Ventilation through wall or roof
7. Floor drain
8. Option to Combine space with Custodial/ Maintenance
9. Option to Combine space with Sprinkler Room
10. Adjacent to Water entrance and Sprinkler Room
11. Proximity to mid-point of Building preferred
12. Approximate Existing S.F. Area: 140 S.F.

e. Sprinkler Room 80 NSF

1. Main Sprinkler distribution piping, valves, controls and alarms
2. Water Utility Entrance
3. Floor drain
4. Option to Combine space with Mechanical/ HVAC Equipment Room
5. Proximity to mid-point of Building
6. Approximate Existing S.F. Area: 80 S.F.

f. Electrical Room 100 NSF

1. Primary Electrical service equipment and Distribution panels
2. Emergency Generator transfer switch
3. Adjacent to Electrical Service entrance
4. Proximity to midpoint of Building preferred
5. Approximate Existing S.F. Area: None/ various areas

g. Communications/Data Room 60 NSF

1. Telephone and Data Services entrance/demark
2. Telephone equipment/backboard
3. Data equipment/backboard, racks and I.T. Server
4. Cable T.V. equipment/backboard
5. Entire Building and Patio to have Wi-Fi Service
6. CCTV equipment and recorder
7. Dedicated 24/7 air conditioning system
8. Proximity to mid-point of Building preferred
9. Approximate Existing S.F. Area: None/ various areas

6. UTILITY**a. Exterior Site Features 2 to 3 Acres**

GROTON SENIOR CENTER
GROTON, MA

BUILDING ASSESSMENT REPORT



Existing Groton Country Club



Existing Prescott School



Existing Groton Senior Center

A. GROTON COUNTRY CLUB

- ARCHITECTURAL EVALUATION
- MECHANICAL EVALUATION
- ELECTRICAL EVALUATION
- ESTIMATE OF PROBABLE COSTS

B. PRESCOTT SCHOOL

- ARCHITECTURAL EVALUATION
- MECHANICAL EVALUATION
- ELECTRICAL EVALUATION
- ESTIMATE OF PROBABLE COSTS

C. EXISTING GROTON SENIOR CENTER

- ARCHITECTURAL EVALUATION
- MECHANICAL EVALUATION
- ELECTRICAL EVALUATION
- ESTIMATE OF PROBABLE COSTS
 - SENIOR CENTER REPAIR AND IMPROVEMENT COSTS
 - RENOVATION/ADDITION TO EXISTING SENIOR CENTER
 - NEW SENIOR CENTER

GROTON COUNTRY CLUB
GROTON, MA

BUILDING ASSESSMENT REPORTS



A. GROTON COUNTRY CLUB

1. GENERAL

The Country Club building was reportedly built in the 1960s. The building is a one level structure with a full basement. The main level contains business offices, locker rooms, a large open banquet hall with bar, storage areas, and a commercial kitchen. The main level is about 8,800 square feet and the basement of similar size. The entire lower level contains maintenance shops and storage for equipment and materials. Drawings of the original conditions, or any renovations through the years were not available.

2. SITE

The Groton Country Club is remotely sited on a golf course abound with attractive surroundings. The location is somewhat secluded, and offers a tranquil environment that is quite different when compared to other potential urban settings. The immediate site surrounding the building is sloped from one end of the building to the other for approximately a 4 foot vertical differential. The majority of the parking is remote and located at the bottom of the slope some 100 feet from the front entrance. The vertical drop the building's main level to parking is estimated at 15 feet. This parking area is shared with a small restaurant on the premises. 3 parking spaces are designated as accessible and located about 50 feet away from the accessible end-of-building entrance. Asphalt paving at roadways is in good condition.

- a) Vehicular traffic on the main route serving the access drive to the site is often very heavy, making it a difficult site for senior drivers to approach, and making the location less appealing.
- b) Existing parking, areas, driving range, golf course fairways, pool and restaurant severely limit areas of potential development for additional parking on a replacement Country Club facility. Further limits the possibilities for parking or building expansion in these areas. Refer to attached annotated Country Club aerial photographs for description of Country Club property and suitability for development.
- c) Sidewalk approach near the accessible entrance contains a recessed area. This irregular condition at the sidewalk plane results in a tripping hazard.

3. BUILDING CODE

The existing Groton Country Club building may have been a Code compliant building when first constructed, and when partially renovated. However, several portions of the building are not compliant with current building codes, most importantly 521 CMR, the Architectural Access Board regulations (Accessibility Code). Applicable codes today include 780 CMR – the Massachusetts State Building Code, and the 2009 International Existing Building Code. The building structure is wood frame, combustible, and unprotected. We were unable to verify the presence of thermal insulation within wall cavities.

- a) The exterior steel guard railing allows passage of a 6-inch diameter sphere, is not code compliant, and represent a fall hazard for small children.
- b) Exterior covered patio lacks a guard railing at the end condition and represents fall hazard to persons.

4. ACCESSIBILITY

Overall, the building is not accessible per MA Building Code 780 CMR, MA Architectural Access Board Regulations 521 CMR, and the American's with Disabilities Act (ADA). There are safety issues to resolve and significant barriers to the accessibility of the Country Club building including, but not limited to the following deficiencies.

- a) The main entrance to the building is not accessible. Entry is by stair only.
- b) Entry requires a series of steps to be negotiated to reach the main entrance door. Ramps are not present.
- c) Access to the men's and women's locker rooms is not accessible and requires users to enter and exit via stairs.
- d) The locker room facilities do not fully conform to accessibility code although several features have attempted to conform. Sinks
- e) Persons in wheelchairs must gain access to the building via a door at the far end of the building. These persons do not experience the same sense of entry as other patrons entering through the main front entrance.
- f) Knob type door hardware is the standard within the building and is not accessible.
- g) Shower facilities lack adequate maneuvering space and grab bars.
- h) Thresholds are greater than ½ inch in height and are inaccessible.
- i) An elevator between the main level and basement does not exist. Should spaces in the basement level be renovated into senior center functions, the lower level is technically accessible through an accessible rout to the existing walk-out feature of the maintenance shop. Therefore, an elevator may be desirable, but not required.
- j) Toilet room facilities at the basement level have not received accessible upgrades or cosmetic renovations since the date of original construction.

5. BASEMENT

A full basement level exists with foundation walls constructed of cast in place concrete. The floor is a concrete slab on grade. The entire basement area is unimproved and is currently used as a grounds maintenance shop with general storage. The floor area contains a structural grid with several 4 inch diameter steel columns supporting the wood framed floor construction directly above (the main floor). The main floor is constructed of 2 x 12 joists spaced 16 inches on center and spanning 16 feet.

6. FIRST FLOOR

Interior walls and several ceilings are generally painted gypsum board or plaster. Interior finishes appear in reasonable condition, with some worn areas in need of modernization. Interior floor finishes include ceramic tile, carpet, and wood. Flooring materials are mixed with ceramic tile in locker rooms and bathrooms, wood and carpeting in the large open banquet room, and synthetic wood flooring at the main entry business office area.

- a) Main entrance to facility lacks an entry vestibule, resulting in energy loss during heating/cooling cycles.

7. EXTERIOR ENVELOPE

Roof coverings include asphalt shingles and rubber membrane type roofing. The asphalt shingled portions comprise roughly 85% of the roof coverage. Asphalt shingles are reportedly 30 years old but do not appear worn and at the end of their life cycle. Exterior walls are built of painted wooden siding, brick, and concrete masonry units (CMU) at the kitchen area. Windows are generally of wood construction with some in poor condition. Windows are both single pane and insulated glass models. Exterior doors are wood in fair condition. Given the age of the building, we can presume fiberglass batt insulation is likely to be installed. The R value of the exterior perimeter walls may be R-13 or less. Addressing the following deficiencies is necessary to bring the building back to a baseline standard of use:

- a) At reportedly 30 years old, the shingle roofing has reached the end of its useful life and requires replacement.
- b) Several exterior window sills and wood trim are deteriorated.
- c) Portions of brickwork are deteriorated at the front exterior elevation.
- d) Wooden siding panels at rear elevation are deteriorated and in poor condition. Siding is in near contact with adjacent ground surfaces. Wood siding then absorbs any standing surface water that may be present. Current condition is responsible for accelerating the deterioration of the siding materials.
- e) Thermal insulation within the attic space and at the ceiling plane is approximately 8 inch and non-code compliant.
- f) Portions of exterior painted wooden siding at rear elevation have been repaired. It appears either the ground plane was installed too high in relation to the wooden wall, or, the wooden siding was extended downward to meet the ground plane. Current condition allows water absorption from the ground plane into the wooden siding, and accelerates deterioration.

7. ADVANTAGES OF COUNTRY CLUB FOR USE AS SENIOR CENTER

- a) The building contains large open spaces that can be repurposed for individual Senior Center functions.
- b) A commercial kitchen already exists within the floor plan and is large enough to satisfy the proposed Senior Center space needs program requirements.
- c) The site is a beautiful environment.
- d) The proposed Senior center space needs program area can fit within the overall building but will require substantial use of basement areas.

8. DISADVANTAGES OF COUNTRY CLUB FOR USE AS SENIOR CENTER

- a) Accessibility is an issue to resolve for this building. The primary front entrance is not accessible, although a reasonable accommodation has been made to create an accessible entrance at one end of the large function room. The two entrances to the locker rooms are not accessible but can be made accessible.
- b) The building does not contain an elevator, thus use of the entire basement floor plate is not readily available. However, should seniors be comfortable using an exterior accessible route to travel from the main level to the basement level entrance, an elevator is not a requirement. Entrance to the basement level is currently through an opening in the foundation wall and used by the grounds maintenance shop.

- c) The quality of the available square foot area in the basement is not good for housing occupied Senior Center program spaces. There is distinct lack of natural light and access to windows.
- d) Parking spaces are remote from the building and lower than the first floor level. Accessible ramps are required to gain access to the locker rooms and the primary front entrance to the building.
- e) Should the large open banquet hall spaces be subdivided into smaller spaces, access to natural daylight may be difficult.
- f) The building does not have a designated area where vehicles can easily drop off passengers at grade, or close to the main front entrance of the building.
- g) Structural alterations may prove to be exceedingly expensive. The building is built of wood frame construction. Should an emergency shelter be incorporated, building code requires extensive structural alterations to internally brace the building against seismic forces. These types of structural improvements to an older wood framed building include, but are not limited to the following: transforming all perimeter walls into structural sheer walls; adding plywood panels and increasing the nailing pattern into wood studs at all perimeter shear walls; connecting floor and roof diaphragms to surrounding perimeter shear walls with steel hurricane fasteners; installing wooden X-bracing at the underside of all roof trusses; installing steel hold-down anchors mechanically fastened and epoxy grouted into existing concrete foundations; construction of internal shear walls built of steel X-bracing; connecting the new steel shear walls to concrete foundations at the basement to the existing wooden roof diaphragm above.

9. SUMMARY AND RECOMMENDED IMPROVEMENTS

The Country Club offers a quiet and beautiful setting for a community Senior Center. Concerns for creating adequate accessibility to the building, and within the building are significant challenges to overcome. Suggested improvement to the existing facilities include:

- a) New elevator.
- b) Modifications to the kitchen to improve accessibility and general function. The kitchen equipment is not new and may need to be upgraded or replaced to best serve the Senior Center's needs.
- c) Replacement of roof covering.
- d) Repairs to deteriorated windows and trim.
- e) Continue the accessible upgrades to the toilet rooms and locker rooms at the main level including grab bars, and increasing stall size for accessible toilet compartments. Adequate floor area is available to accommodate fixture counts and functions. Locker rooms are not part of the Senior Center space needs program, but are an integral component of the current use. The exterior entrance to the locker rooms should be made accessible.
- f) Code compliant stair and handrails. One 36-inch wide stair with wooden railing to the basement exists. Although the basement is an entirely different use as a grounds maintenance shop, the building occupants would be better served with at least one 42-inch wide stair and code compliant railing.
- g) Power assisted accessible door at the existing accessible entrance at the end of the building.

- h) New accessible ramp to the primary entrance to the building. At current conditions, seniors wishing to enter the building through the primary entrance must climb a flight of stairs to reach the exterior covered patio. A remote accessible entrance already exists, but is located hundreds of feet away from the general parking area.
- i) Designated vehicular drop off area near the main entrance.
- j) New accessible parking spaces in close proximity to on-grade access. Recommend 20 designated accessible spaces.
- k) Correct the conditions leading to deteriorated siding at the rear elevation. Replace deteriorated siding. Where possible, ensure the grade adjacent to the building slopes away from the building.
- l) Renovate the basement toilet room facilities to current accessibility standards.
- m) Construct an entry vestibule to save energy costs.
- n) Add insulation in the attic to obtain R-40 for energy savings.

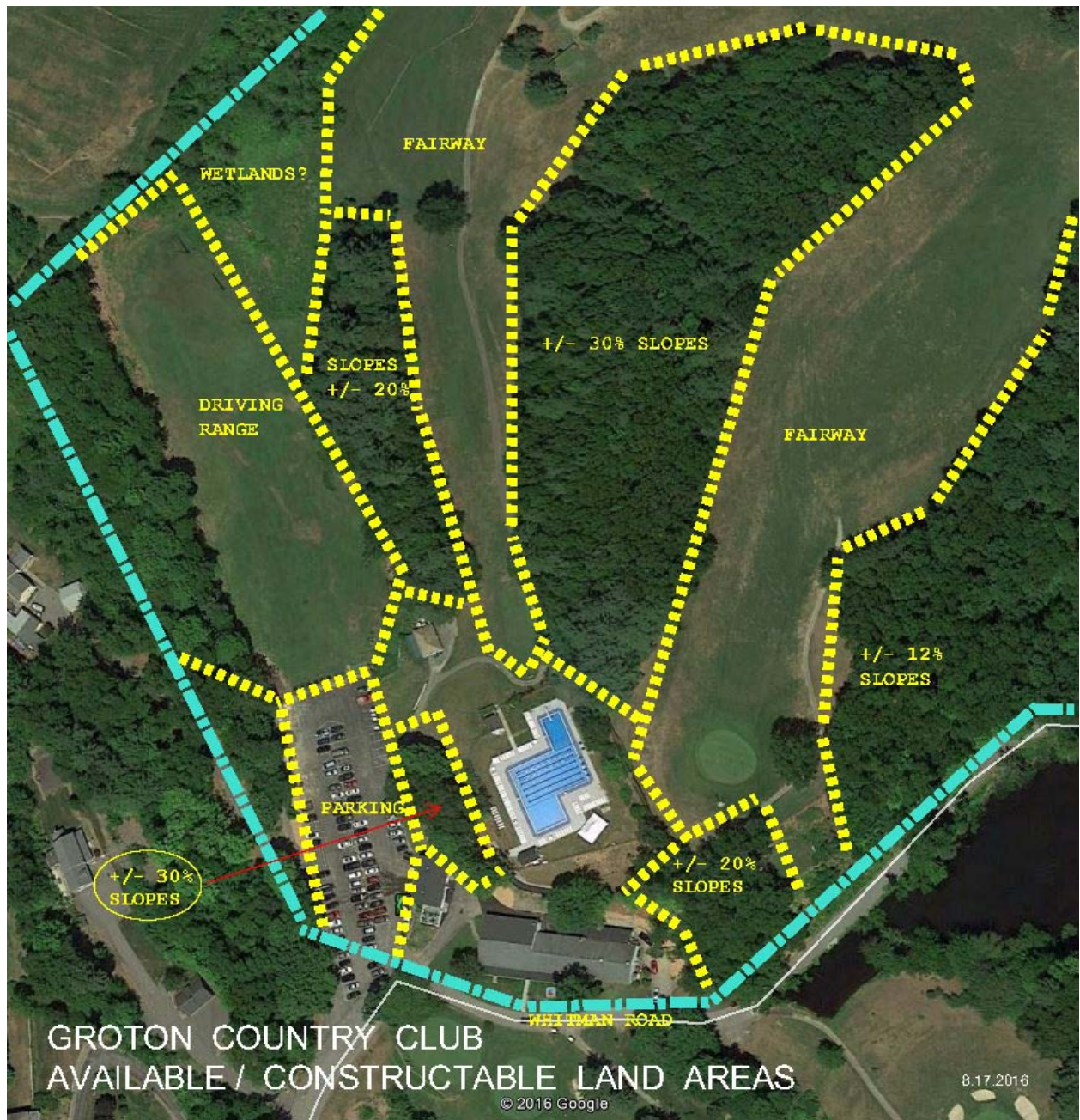






Photo CC4B: Main level is raised from surroundings and parking. The lower level is accessible through opening in foundation.



Photo CC4G: View from the 3 designated accessible parking spaces to the accessible entrance at the end of the building.



Photo CC2C: Tripping hazard near accessible entrance.



Photo CC4E: Accessible entrance is located at far end of building.



Photo CC4A: Primary entrance door to the building is not accessible.



Photo CC3A: Raised exterior patio lacks guard railing and represents fall hazard to users.



Photo CC1: Building contains two Large open areas suitable for large gatherings and events.



Photo CC1: Existing commercial kitchen is available for use.



Photo CC7F: Where deteriorated wooden siding had occurred near the ground plane, current maintenance practice is to remove segments and replace with new panels.



PhotoCC4D: Locker rooms lack numerous accessible features including accessible shower stalls and entrances.



Photo CC3B: Fall hazards. Horizontal guard railing less than 42 inches in height. Spacing of vertical members exceeds 4 inches and allows passage of small child through railing.



Photo CC10F: Existing stair to basement is 36 inches wide.



Photo CC5: Large, dry and open basement exists but space is windowless and lacks natural light.



Photo CC4C: Inaccessible entrance to locker rooms.



Photo CC4D: Locker room facilities at main level have received accessible upgrades since original date of construction. Conditions include non-accessible toilet stalls, mirrors at sinks not mounted at an angle to the user.



Photo CC4L: Toilet room facilities located at the basement level date to the original construction and have not received accessible upgrades.



Photo CC7D: Deteriorated wooden siding at rear elevation. Hillside at rear limits expansion possibilities.



Photo CC4D: Toilet compartment lacks accessible grab bars and turning radius. Doors contain inaccessible knob hardware and lack lever handles.



Photo CC6A: Main entrance to facility lacks an entry vestibule, resulting in energy loss during heating/cooling cycles.



Photo CC7B: Deteriorated wooden window, sill and associated trim.



Photo CC7E: Approximately 8 inches of fiberglass insulation at ceiling plane within attic space.



Photo CC7C: Portion of deteriorated brickwork at front elevation.



Photo CC4H: Raised threshold at exit door results in tripping hazard. Inaccessible knob door hardware is typical.

1. GENERAL MECHANICAL

During a May site visit, existing mechanical systems at the Groton Country Club were observed, deficiencies and conditions were noted and the following narrative is the result of this effort. The building consists of two levels, the ground floor being used for building services/storage, and the 1st floor level being used for public space. In general and overall condition of the building mechanical systems would be considered in serviceable condition but approaching, or in most cases exceeding, the expected useful life expectancy of the equipment.

2. EXISTING AND REQUIRED FIRE PROTECTION SYSTEMS

The existing building does not provide means of an automatic fire suppression system. This building is zoned as multi-usage utilizing 8,800 sq. ft. of space on each floor. A 6 inch steel water pipe enters the building, a 2" water line was take off for plumbing requirements to be addressed further in this report, and the 6" main is capped off with a bolted flange connection. It does appear that when the building was constructed and/or when the water service was brought to the building it was intended to provide a suppression system at a future date. Any significant renovation to the site would trigger the requirement to incorporate a full suppression system into the entire building.

The addition of a fire suppression system must be designed within the following constraints and criteria:

- a) As a result of the water service pipe to the building it is reasonably assumed that water is available for the addition of a suppression system. A flow test would need to be conducted to confirm adequate pressure would be available for the system.
- b) All spaces including combustible construction will require the addition of a suppression system, including but not limited to the occupied areas, the ground floor storage areas, the attic space and the covered porch.
- c) Spaces requiring a suppression system located in an unconditioned space would require a dry type of system.
- d) Based on current space usage light hazard sprinklers will be required and a minimum run time of 30 minutes must be achieved.

3. EXISTING PLUMBING DOMESTIC WATER SYSETM

The building's domestic water systems are comprised of all systems requiring potable water throughout the building. The grade level originally consisted of bathroom and shower fixtures which have since been disconnected and abandoned in place. As a result these fixtures will not be included in this report or in future fixture counts/sizing requirements.

- a) The incoming water service and domestic water heating system are located in the ground floor of the building. (Photo CC3A)
- b) The incoming water service appears to have been brought in for future expansion and the addition of a fire protection system. A 6 inch steel pipe with flanged cap enters the ground floor of the building and a two inch potable water service is tapped off. From this 2" main water service the building appears to have been broken into sections including the rear locker rooms, the commercial kitchen/bar, an irrigation system tie in (for emergency use and priming of pumps only per onsite maintenance staff) and the 1st floor restrooms.
- c) The Domestic hot water system consists of a direct oil fired domestic water heater with 70 gallons of storage. The system overall included provisions for both tempering of supply water temperature and system expansion. Oil is provided to the unit from a residential style fuel oil storage tank with proper vent and fill lines. The oil tank

appears to be dedicated to the domestic water heater as several tanks were located around the site. No means of recirculation was present. (Photo CC3C)

- d) Connected to the domestic water system inside the building are:
- i. The first floor restrooms: five (5) water closets, four (4) lavatories, one (1) urinal, one (1) janitors sink and one (1) water cooler.
 - ii. The commercial kitchen utilizes a 3 pot sink, a commercial grade dishwasher, a hand wash
 - iii. sink and a coffee maker.
 - iv. The bar area has one source of water at a three pot sink; the bars back room contains a single residential style kitchen sink with two bowls and a spray nozzle. Also connected to the domestic water system is the locker room space.
 - v. The men's locker room has two (2) water closets, one (1) urinal, two (2) lavatories and two (2) shower stalls.
 - vi. The women's locker room has three (3) water closets, two (2) lavatories and two (2) shower stalls.

4. EXISTING PLUMBING SANITARY SYSTEM

The building's sanitary systems shall be comprised of any and all waste water plumbing systems conveying waste products and solid materials to an external sewer system. Piping system does not carry storm, surface, clear water or ground water.

- a) Sanitary piping is routed through the basement, exits through the wall in the rear of the building, and into the city sewer, location unknown. It appears that the existing sanitary line is of adequate size for the connected fixtures. Any additional fixtures would need to be evaluated. (Photo CC4A)
- b) The first floor has both men's and women's restrooms. The women's room consists of three water closets, two lavatories. The Men's restroom consists of two water closets, one urinal, and two lavatories. A water cooler is located directly across from the restrooms, and a janitor's mop sink is located in a closet between the common space and restrooms.
- c) The locker rooms connected to the sanitary system include four (4) shower stalls, five (5) water closets, four (4) lavatories, and one (1) urinal.
- d) The commercial kitchen utilizes a 3 pot sink with internal grease trap sized for maximum 35 GPM (MIFAB Model MI-G-L-35), no flow control device was observed, and a commercial grade dishwasher through a separate trap. No floor drain was observed. A hand wash sink is just outside the kitchen area behind the dishwasher. (Photo CC4D)
- e) The bar area has a single bowl sink for glass cleaning, a three pot sink, and an ice bin. In the bars back room is a single residential style kitchen sink with two bowls and a spray nozzle. (Photo CC4E)

5. HVAC AIR HANDLING SYSTEMS

Building air handling systems shall be comprised of any air movement systems regardless of ability to temper the air temperature, provide fresh (ventilation) air to a space and/or provide any form of filtration.

- a) The HVAC systems for the building include a total of six (6) air handling units.
- b) There are four (4) cooling only units with direct expansion (DX) coils located in the attic space, and two (2) oil fired heating only units. The condensing units serving DX cooling coils in attic were located in the rear of the building on housekeeping pads. Units utilize R-22 Refrigerant, with dates of manufacture in 2000.

- c) The cooling only units located in the attic were manufactured in 2000. A total of 18.5 tons of cooling is provided to the space through three (3) 5 ton units and one (1) 3.5 ton unit.
- d) One heating only unit is located in a small shed off the commercial kitchen, unit is a Carrier Model 5BBMA105 with 85,000 Btu/hr. output capacity manufactured in December of 2000. The other is located in a mechanical closet located at ground level. The unit is a Metrometic Mfg., Inc. Model LB-140 with 140,000 Btu/hr. input.
- e) The HVAC systems serving this building run ductwork for the heating and cooling systems separately to the spaces. Both chimneys serving oil fired furnaces were in poor condition. The clay liners internal to the chimneys would need to be evaluated and cleaned. The unit located in the mechanical closet on the ground level has had the cleanout removed and sealed over.
- f) The commercial kitchen utilizes a Type I Grease Exhaust System located over a 10 burner propane stove and stacked convection ovens. Grease exhaust duct goes up to the roof and terminates into a variable speed fan on the roof (size unknown). The hood does not contain a makeup air plenum and makeup air is not directly provided to the space. As the kitchen is permanently open to the large community spaces makeup air is provided from the adjacent space. (Photo CC5F)
- g) Controls observed throughout the spaces varied in type, the majority were dial type non-programmable with a couple exceptions. Replacement of existing air handling units would be accompanied by any antiquated controls.
- h) Mechanical ventilation to the spaces is very limited. Outdoor air is not ducted to any tempering equipment. Exhaust systems are provided for restrooms, locker rooms and the kitchen. The majority of spaces rely on natural ventilation through operable windows.
- i) Fuel oil tanks are located around the building to serve various oil fired equipment, including both oil fired ducted furnaces and the oil fired domestic water heater. Two tanks are located within the building and one is located outside adjacent to the small shed housing the oil fired ducted furnace. None appeared to have safety valves or oil supply lines in protective sheathing (double wall oil supply pipe). (CC5I)
- j) The exhaust systems serving bathrooms located on the first floor and locker rooms attached to the building were not evaluated. The exhaust fans serving the locker rooms were inaccessible; however we were told by onsite maintenance that the fans were ¼ HP each. (CC5J)
- k) The exhaust system serving the main roof consisted of two roof mounted exhaust fans ducted down to exhaust grilles located within the space. Fans appeared to be for air exchange only and a form of manual economizer control for non-tempered fresh air.

6. MISCELLANEOUS MECHANICAL ITEMS

- a) The gas stove is connected to two liquid propane tanks located exterior to the building immediately outside of the kitchen on cinder blocks. No issues were noted with the location or service of this system.
- b) The irrigation system tied into the building water service, with independent backflow prevention, is for use under emergency circumstances only. An onsite pond provides the primary source of water for irrigation.
- c) The commercial kitchen Type I Grease Exhaust System does contain a fire suppression system with suppression heads located within the canopy and a single head into the grease exhaust duct connection. The liquid propane system contains an emergency shut off valve tied into the fire suppression system to shut off fuel under activation of the suppression system. Old through wall fan was installed prior to larger Type 1 system for some relief, has been abandoned in place.

- d) Restrooms and locker rooms are not directly supplied by the heating air handling systems. As a result, each restroom and locker room is served by a small electric resistance heater with fan. These units are wall mounted with built in temperature control.

7. MECHANICAL DEFICIENCIES

- a) The Building does not contain a fire suppression system; under any significant renovation a fire protection system would need to be incorporated. Refer to International Existing Building Code (IBC-2015) under Alteration Level 3.
- b) The International Mechanical Code (IMC-2009) requires that Type II hoods be installed above dishwashers that produce heat and moisture and do not produce grease or smoke, except where the heat and moisture loads from such appliances are incorporated into the HVAC system design or into the design of a separate removal system. A Type II kitchen hood for the removal of heat and moisture from the space is not present and is required. (Photo CC7A)
- c) Fuel/oil piping serving oil fired equipment is single wall with no containment. Under Chapter 453 of the Acts of 2008, as most recently amended in 2010, require the installation of either an oil safety valve or an oil supply line with protective sleeve on systems that do not currently have these devices. While this is typically enforced on residential appliances only, it is also typically at the discretion of the Authority Having Jurisdiction (AHJ) or in this case the local fire department. Any replacement of equipment, re-distribution or additional of equipment could trigger this requirement. (See Photo CC5I).
- d) Existing mechanical ventilation system appears to be inadequate. While natural ventilation is code compliant, it is rarely used during the winter and summer months. The addition of a make-up air unit and/or the addition of outdoor air components to split systems would be required to provide this ventilation. Due to the usage of the spaces energy conservation measures may be required to pre-temper ventilation air, increasing initial costs but reducing operational costs.
- e) Per the Massachusetts Plumbing Code 248 CMR Section 10.9.2.i Flow Control Devices #1 Grease traps and interceptors shall be equipped with flow control devices. Per the manufacturers installation instructions it does appear that this model did not come with an integral flow control valve and would have been external.

8. RECOMMENDED BUILDING IMPROVEMENTS FOR SENIOR CENTER USE

- a) The majority of HVAC equipment in the building is near the end of its useful life expectancy. Maintenance on the cooling units could prove costly as the existing units are R-22 refrigerant, which has been discontinued, reducing replacement parts and materials available. With the useful life expectancy of a split system with DX cooling being about 15 years and oil fired furnaces being between 20-25 years, replacement during any significant renovation would be appropriate.
- b) Reconfiguration of the space may require re-distribution and/or zoning. This can be more easily accomplished while replacing existing units. This will also assist in minimizing the impact of providing additional mechanical ventilation to the space.
- c) The addition of a domestic water recirculation pump would reduce energy and water usage. With the current open ground floor the addition of a recirculation loop could be easily accomplished.
- d) Existing chimneys serving oil fired equipment should be cleaned and inspected to determine current status/integrity and determine required repairs.

- e) In addition to the above information, and with reference to the architectural portion of this report, the ground level of this building would be renovated to include occupied space. An elevator would need to be incorporated into the building and the restrooms located on the ground floor would need to be renovated.
- f) For the building use as an emergency shelter a new diesel fired emergency generator would be provided (Refer to the electrical portion of the report). Plumbing trade would be required to vent the generator to above the building roofline.

9. ADVANTAGES OF THE COUNTRY CLUB FOR USE AS SENIOR CENTER

- a) Commercial kitchens are a significant investment in new or renovated Senior Center's. The majority of the required equipment is currently installed; the addition of a Type II ventilation hood to the dishwasher, make-up air to the grease hood and some misc. plumbing upgrades would permit reasonable use of the existing kitchen facilities.
- b) While the fire suppression system has not been installed, it appears that the water service is available within the building. This will save site costs to increase the size and available flow of the incoming water service.
- c) The existing domestic water system is in good working order and would require minimal modification for continued use, and addition of ground floor restrooms identified under the Architectural portion of this report.

10. DISADVANTAGES OF THE COUNTRY CLUB FOR USE AS SENIOR CENTER

- a) Energy cost for this building could be high. Oil fired equipment typically runs at lower efficiencies and fuel costs per unit energy are typically higher. Liquid propane is convenient for cooking equipment however it also carries with it a higher operating cost than natural gas.
- b) Existing HVAC system serving the building are beyond their useful life expectancy and require replacement. Due to the location of the existing cooling unit the attic spaces would need to be opened to both remove existing equipment and install new equipment. In addition, the building utilizes two sets of ductwork requiring two sets of air handling units (1 set cooling only, 1 set heating only). This will increase the upfront cost for the replacement of HVAC equipment.
- c) As current HVAC systems do not have mechanical means of providing outdoor air / ventilation air components, additional attic penetrations, attic mounted equipment and controls would be required to provide mechanical ventilation air to the spaces. Ventilation would be provided as required by the International Mechanical Code (IMC-2015) with energy conservation measures as required by the International Energy Conservation Code (IECC-2015).
- d) The attic space will require a dry pipe suppression system as it is located above the insulation line. Where only portions of the ceiling would need to be demolished to remove and replace the existing HVAC systems, the remaining attic space would pose a difficult space to install a fire protection system and labor costs would be higher than other buildings.



Photo CC3A: Existing water service to the building



Photo CC3C: Existing domestic water system showing water heater, expansion tanks and temperature mixing devices.



Photo CC4A: Existing sanitary service the building



Photo CC4D: Existing 3 Pot Commercial Kitchen Sink



Photo CC4E: Existing Bar Plumbing Fixtures.



Photo CC5F: Type 1 grease exhaust system with fire suppression.



Photo CC5I: Existing Fuel/Oil Storage Tank with Supply Line. Also note the condition of the chimney directly adjacent.



Photo CC5J: Exhaust systems serving the locker room.



Photo CC7A: Existing Dishwasher without Type II hood.

1. GENERAL ELECTRICAL

During a May site visit, existing electrical systems at the Groton Country Club were observed, deficiencies and conditions were noted and the following narrative is the result of this effort. The building consists of two levels, the ground floor being used for building services/storage, and the 1st floor level being used for public space. The overall conditions of the building electrical systems are for the most part in working good/fair condition; however, the majorities of the systems are beyond their operating life-cycle and are limited in their ability to accommodate any major renovation.

2. EXISTING CONDITIONS

The facility is fed from 2 – 200A 120/208 Square-D panels. Panel A feeds a basement panel primarily feeding condensing units and heat throughout the building, while Panel B feeds various Sub-Panels and equipment. Sub-panels are located in the kitchen, near the Ballroom Bar, and in the basement area. There have been some upgrades and/or additional panel installed. However, the existing service and several other panels are outdated and lacking in spare capacity. Some of the panels are located in areas which do not afford the proper safety clearance, or comply with the proper mounting height. For the most part the general outlets appear to be adequate. The kitchen area does not have the proper NEMA 4X type disconnects associated with the equipment. (Photos CC-1, CC-2, and CC-3)

The present lighting is antiquated and inefficient. The kitchen is equipped with strip fluorescent T-12 lighting with exposed lamps. The main ballroom area is equipped with incandescent down-lights, some pendant lights, and multi-colored cove lights. The general office and locker room areas are generally equipped with surface strip and wrap around type lighting. The basement is equipped with industrial fluorescent fixtures. (Photos CC-4 and CC-5)

Egress lighting in the kitchen and basement areas seem antiquated and lacking in the proper coverage. The main ballroom and office areas seem to have been upgraded the emergency lighting to an adequate level. Exterior egress lighting is present at the front stairs and ramp. Remaining exterior lighting may need upgrading. (Photo CC-6)

The existing Fire alarm system has had some upgrades, with the exception of the basement area. Audio/visual coverage seems to be lacking, mostly associated with the visual requirement needed to meet the present NFPA 72 Fire Alarm Code. Existing fire and smoke detection coverage, although adequate, may be approaching its replacement service life. (Photo CC-6)

The branch circuits throughout the facility appear to be fed mostly by romex. The romex wiring runs from basement to upper floor. (Photo CC-1)

3. CODE DISCREPANCIES

The facility must comply with the Massachusetts Electrical Code 527 CMR 12 (MEC). Any major renovation or addition will require the facility to comply with the latest version of the International Energy Conservation Code (IECC)

The improperly rated kitchen disconnects need to be replaced with NEMA 4X type.

All existing Romex branch circuit wiring will have to be replaced with any future renovation and/or addition. Present code does not allow romex to run from floor to floor.

Emergency/egress lighting may not comply with the present NFPA 101 Life Safety Code and Massachusetts Building Code 780 CMR standards, and should be supplemented with newer LED type fixtures as well as adding additional exit lights where required. The egress lighting needs to be measured with light meter to assure proper levels are met. Additional battery pack lighting will be needed, since the present system appears to have some areas which are not in compliance.

Exterior Egress lighting needs to be upgraded, existing exterior lighting is inadequate.

The original electrical panels are beyond their design service life. The existing service will have to be upgraded to supply the additional power requirements associated with the renovation and elevator. Sub-panels will have to be relocated to allow for proper working clearances, and mounting height.

The existing lighting does not meet the standards expressed in the IESNA for quality lighting. The present lighting is inefficient and antiquated. Present lighting will not meet the present IECC requirement. The fluorescent and incandescent lamping will not meet the required power density and the fixtures will need to be equipped with dimming and lighting controls. LED type lighting, which is equipped with dimming, is recommended to comply. Cove lighting may also be required to be replaced with LED.

Basement lighting will have to be replaced with new since the area is unfinished and lacking in proper light levels.

The existing Fire alarm system will require upgrades to meet the current code with any renovation and/or addition.

4. RECOMMENDATIONS

The telecommunication systems should be upgraded to meet the demands of any renovation.

General power outlets quantity and location will have to be supplemented to accommodate the renovation.

The Electrical Service should be upgraded to a 600A 120/208V system.

A Lighting control system should be installed to allow for multi-schemes in the main assembly areas and compliance with the IECC.

The electrical power distribution system should be re-configured to accommodate any new renovations and for code compliance. Panel numbers would be reduced with the elimination of present hazardous panel locations.

Upgrade exterior lighting to include additional parking area lighting.

Install lightning control system as required by IECC.

5. ADDITIONAL REQUIREMENTS TO PROVIDE FOR AN EMERGENCY SHELTER

Requirement of Article 708 (Critical Operating Power Systems) of the NEC will be required.

The electrical service equipment, feeders, and critical branch circuits will need to be isolated with the proper fire separations.

Electrical surge protection will be required on the incoming service panel.

All fire alarm and critical branch circuits will need to be installed in conduit or other methods to provide the proper fire separations'

An emergency generator will be required with an on-site fuel source with enough fuel to operate for 72 hours.

6. ADVANTAGES OF REUSING THE GROTON COUNTRY CLUB

The Country Club appears to have the capacity to upgrade the service without major upgrade requirements from the utility company. This is based on an estimated electrical service of 600A.

7. DISADVANTAGES OF REUSING THE GROTON COUNTRY CLUB

The Country Club's major electrical disadvantage is the existing branch circuit wiring. Romex would not be allowed, under the present code. Any renovation would trigger this code and require all branch circuitry to be replaced.

Achieving the proper fire separation between normal and emergency power may be difficult do to the age and construction of the Country Club.

An increase in demolition is required, due to the removal of all Romex cabling.



Photo CC-1: Main service and example of Romex wiring



Photo CC-2: Kitchen disconnect



Photo CC-3: Improper placement of electrical equipment



Photo CC-4: Exposed lamps



Photo CC-5: Basement Fixture



Photo CC-6: Kitchen Egress Lighting and Fire Alarm example

ESTIMATE OF PROBABLE GROTON COUNTRY CLUB COSTS

Basis of Estimate: Existing Country Club Evaluation Study
 Repair of Identified Deficient Building Conditions, Code Deficiencies and
 Recommended Improvements for Senior Center Renovations

A. SITE WORK

1.	Recessed portion of sidewalk near accessible entrance	\$ 1,000.
2.	Repair cracked asphalt paving (Allowance)	5,000.
3.	Lot const., line painting, conc., signage \$1,700/car x 25 cars	42,500.
4.	Modifications to storm water management system	25,000.
5.	Accessible ramp to primary entrance, \$685/LF x 90 LF	61,000.
6.	Designate 20 accessible parking spaces close to building	10,000.
7.	Misc. site signage (Allowance)	12,000.

B. ARCHITECTURAL

1.	Exterior brickwork (Allowance)	3,000.
2.	Roof covering (Allowance)	90,000.
3.	Exterior siding (Allowance)	30,000.
4.	New guard railing at covered patio	3,000.
5.	Replace guard railing	6,000.
1.	Repair existing window sills and associated trim	15,000.
2.	Insulate 8,800 SF attic space to energy code standard	6,000.
3.	Reconstruct toilet rooms at basement	35,000.
4.	Build entry vestibule, partitions, door, glazing	20,000.
5.	Provide accessible locker rooms	40,000.
6.	Accessible improvements to toilet rooms (Allowance)	12,000.
7.	Misc. accessible improvements	15,000.
8.	Replace non-compliant door thresholds	10,000.
9.	2-stop Elevator (Allowance)	140,000.
10.	Accessible equip./improvements to commercial kitchen (Allowance)	35,000.
11.	2 New egress stairs to basement (Allowance)	30,000.
12.	Remove knob door hardware, replace with lever handles	2,000.
13.	Partitions, doors, finishes at basement, 8,800 SF x \$80/SF	704,000.
14.	Renovate main level for program spaces, 8,800 SF x \$100/SF	880,000.

C. STRUCTURAL

1.	Improvements to accommodate new elevator (Allowance)	50,000.
2.	Misc. seismic improvements (Allowance)	100 - 150K.

D. PLUMBING

1.	Flow Control Devices for Commercial Kitchen	2,000.
2.	Cleaning and Inspection of Three (3) Existing Chimneys (Allowance)	6,000.
3.	Addition of Re-Circulation Pump	5,000.
4.	Miscellaneous Plumbing Repairs	8,000.
5.	Extend Vent Serving New Diesel Generator Above Roof Line	5,000.
6.	Basement Plumbing Costs Included in Architectural S.F. Costs	

7.	LP Tank/ Supply for Emergency Generator	24,000.
E.	FIRE PROTECTION – MUST BE INSTALLED UNDER ALTERATION LEVEL 3	
1.	Wet Pipe Automatic Sprinkler System (17,600 S.F.)	88,000.
2.	4" Dia. Dry Standpipe for two floors	21,000.
3.	4" Dia. Dry Standpipe for single floor	7,000.
F.	HVAC	
1.	Type II Hood Over Dishwasher	15,000.
2.	Addition of Ventilation Component w. Energy Recovery	50,000.
3.	Demolition of Existing HVAC Units	7,000.
4.	Replacement of Existing HVAC Units (4 Cooling Only)	36,000.
5.	Replacement of Existing HVAC Units (2 Heating Only)	15,000.
6.	Redistribution	20,000.
7.	Misc. HVAC Repairs	8,000.
8.	Basement HVAC Costs Included in Architectural S.F. Costs	
G.	ELECTRICAL	
1.	Upgrade the disconnects in the kitchen to 4X type -	3,000.
2.	Replace lighting fixtures with exposed lamps	12,000.
3.	Upgrade existing egress lighting for code compliance	5,000.
4.	Upgrade existing Fire Alarm System for code compliance	8,000.
5.	Utility cost for service upgrade for elevator	10,000.
6.	Upgrade distribution system to 600A 120/208V	33,300.
7.	New 150 KW Diesel Generator (includes site cost)	56,000.
8.	Additional emergency distribution equipment	14,000.
9.	Additional branch circuit requirements	11,000.
H.	TOTAL PROJECT BUDGET SUMMARY	\$ 3,077,800.
I.	CONSTRUCTION FACTORS	
1.	General Conditions/ OH & P @ 15% =	<u>461,700.</u>
	Sub-Total:	\$ 3,539,500.
2.	Study/ Design Contingency@ 10% =	<u>354,000.</u>
	Sub-Total	\$ 3,893,500.
3.	Escalation to Mid-Pt. Const. (9/17) @ 5% =	<u>194,700</u>
	Sub-Total	\$ 4,088,200.
4.	Construction Change Contingency @ 8% =	<u>327,100.</u>

J. TOTAL CONCEPTUAL REPAIR AND IMPROVEMENT BUDGET: \$ 4,415,300.

K. PROJECT DEVELOPMENT EXPENSES:

1.	Architectural / Engineering Services: (DCAM Schedule)	375,000.
2.	Owner's Project Manager (MGL c149§ 44A1/2)	118,000.
3.	Site Survey	3,000.
4.	Legal / Bonding Counsel (Assumed)	30,000.
4.	Printing / Reproduction	18,000.
5.	Legal Advertising / Bid	1,000.
6.	Clerk of the Works	OPM.
7.	Construction Materials Testing	6,000.
8.	Utility Expenses	23,000.
9.	Furniture, Fixtures & Equipment (Allowance)	180,000.
10.	Tel / Data Systems (Est.)	<u>60,000.</u>
	Sub Total:	\$ 814,000.
11.	Project Development Contingency @ 5%:	<u>40,400.</u>

Total Project Development: \$ 854,700.

L. TOTAL CONCEPTUAL PROJECT BUDGET SUMMARY: \$ 5,270,000.

M. REPLACEMENT COST FOR NEW COUNTRY CLUB FACILITY: \$ UNKNOWN.

N. QUALIFICATIONS

1. This Summary of Probable Project Cost is based on a non-specific Building and Site Design and the following assumptions:
 - a. Normal Construction schedule has been used to prepare this Summary.
 - b. Premium time costs are not included. Costs are based on forty-hour workweek, Mon. thru Fri.
 - c. This Summary is based on prevailing wage rates.
 - d. No costs are included for disposal or remedial work on contaminated soil.
 - e. An Allowance is not included for hazardous materials.
 - f. Items that could impact this Summary are:
 - 1) Unforeseen subsurface conditions
 - 2) Restrictive technical specification
 - 3) Non-competitive bid conditions (less than five qualified bids)
 - 4) Sole source specification of materials or products
 - 5) Delays beyond the project schedule or **May 2017 bid date**
 - 6) Accelerated completion
 - 7) Unforeseen permitting conditions
2. This opinion of Probable Budget Summary of Project Cost is made on the basis of the experience, qualifications and best judgment of RAI's Professional Staff. This Summary is for Budget purposes only. Actual construction value is determined after the completion of the Construction Documents and the Bid Award process. Variance of +/- 5% of the Summary amount is probable.

PRESCOTT SCHOOL
GROTON, MA

EXISTING CONDITIONS ASSESSMENT



B. PRESCOTT SCHOOL

1. GENERAL

The Prescott School is located at 145 Main Street in the historic center of Groton. The building is listed on the Massachusetts Register of Historic Places and has been maintained in relatively good condition. The building contains approximately 27,000 square feet on three levels. RAI was provided with a copy of a report dated March, 2012 prepared by the architectural firm of Bargmann Hendrie + Archetype, Inc. The BH+A report studied different reuse scenarios for the building, and detailed several building deficiencies and recommended improvements. In the interests of utilizing this information for the Town of Groton, RAI has reviewed and included within this study much of BH+A's conclusions for the building code deficiencies. We generally concur with the interior recommendations outlined in the BH+A report.

2. SITE

The Prescott School is located on a 2.81 acre lot. The site contains asphalt parking areas, a playground, grass lawn areas near Main Street, the school building, includes wetlands area, and 100 and 500 year flood zones at the rear of the site. The site slopes from an elevation of 327 feet above sea level at Main Street, to 300 feet above sea level at the rear of the site. However, the effective height differential from the front yard lawn area near Main Street, to the accessible rear entrance level at the basement, is only one story or about 10 feet. There are 32 existing parking spaces and 2 accessible parking spaces.

- a) Vehicular traffic on Main Street is particularly severe at times and limits easy access and could appear as a formidable obstacle to senior drivers.

3. BUILDING CODE

The existing building has seen reinvestment over the years and is in generally good condition. In 2006 a major exterior renovation was undertaken by Helene Karl Architects. The exterior shell and brickwork have been maintained, and all windows have been replaced and are in good condition. Applicable building codes today include 780 CMR – the Massachusetts State Building Code, and the 2009 International Existing Building Code. Deficiencies include, but are not limited to:

- a) Stair risers vary by as much as a 1/2 inch in a single run of stairs.
- b) Possibly due to the historic nature of the building, the original stair railings appear to exist. Current code requires stair railings to extend 1' – 0" beyond the riser, at both the top and bottom of a typical flight of stairs. Existing railings do not comply with this requirement.
- c) Exterior egress stairs at the rear of the building and serving the gymnasium are not code compliant. These stairs are roped off and reportedly not in use. The stairs contain open risers, guard railings are low, handrails are built of 2 x 4 stock and not in a code compliant profile, and the overall appearance of the stairs indicates deterioration leading to questionable structural integrity. These stairs should be replaced.
- d) Concrete stairs leading to the basement are not code compliant. Riser heights vary, and handrails do not meet code.
- e) Non-compliant guard rails and handrails at stair.
- f) Accessibility items noted below.

4. ACCESSIBILITY

Overall, the building lacks several accessible features per MA Building Code 780 CMR, MA Architectural Access Board Regulations 521 CMR, and the American's with Disabilities Act (ADA). There are barriers to the accessibility including, but not limited to the following deficiencies.

- a) The main entrance to the building is not accessible and is accessed from exterior stairs only. Entry requires a series of steps to be negotiated to reach the primary entrance door. There are no handrails, riser heights vary, and there is an elevation change at the threshold.
- b) An accessible route to the side of the building does exist, and relies on a series of ramps to negotiate the vertical height change from the parking level to the first floor.
- c) Persons in wheelchairs must gain access to the building via a side door that does not swing into the open position easily. The exterior door is not easily opened by a single person, especially a senior or person with mobility impairments. A power assist feature is recommended.
- d) Door thresholds exceed ½ inch height and are inaccessible.
- e) An elevator connecting the 3 floor levels does not exist.

5. LOWER LEVEL

A full lower level exists with foundation walls. The floor is a concrete slab on grade. Two classrooms exist, but the majority of the lower level is unimproved. Available space is currently used as maintenance and general storage.

6. FIRST FLOOR

Interior walls and several ceilings are generally painted plaster. Interior finishes appear in reasonable condition, with some worn areas in need of modernization. Interior floor finishes include ceramic tile, carpet, wood, and 8" x 8" floor tile at the toilet in the basement. Typical flooring materials used throughout the building include ceramic tile in toilet rooms, natural wood in the gymnasium and at hallways, and carpeting in classrooms that have been converted into office environments.

- a) Older vinyl floor tile of the general 8" x 8" size almost always are presumed to contain asbestos.

7. EXTERIOR ENVELOPE

Exterior walls are load bearing brick masonry. Windows appear to be newer metal clad models and in very good condition. Windows contain insulated glass vision panels. We were unable to verify the presence of thermal insulation at perimeter walls. Given the historic nature of the building, exterior walls are likely solid masonry with any insulating value most likely minimal.

- a) The Kalwall windows at the rear elevation are rusting, and appear worn and deteriorated. It is recommended they be replaced with windows that resemble the original window assembly, or other window styles similar and compatible with those installed during the 2006 renovation.
- b) A new single-ply roofing membrane was installed during the 2006 renovation. There were no reported issues, leaks, or problems associated with this relatively new roof.

8. ADVANTAGES OF PRESCOTT SCHOOL FOR USE AS SENIOR CENTER

- a) The site is located in the heart of Groton and close to other civic functions, cultural amenities and local businesses. Seniors may find the close proximity to these attributes desirable.
- b) The building has been maintained in good condition, and significant new investments have occurred such as the exterior windows. The interior space contains individual classroom spaces that could be programmed for individual Senior Center functions.
- c) The program area could fit within the basement and first floor area.
- d) The 2-story gymnasium could be used for large gatherings.

9. DISADVANTAGES OF PRESCOTT SCHOOL FOR USE AS SENIOR CENTER

- a) Providing accessibility will be a major issue to confront and resolve. The building does not contain an elevator. The lower level is accessible from the parking area, but is not connected to the upper levels with vertical transportation.
- b) The 15,000 SF program does not fit onto a single floor plate. Thus, program spaces on the lower, main and upper levels are not interconnected.
- c) The primary front entrance to the building is not accessible. Adding designated accessible parking near the front entrance, along with a modest accessible ramp to the main entrance, could ensure accessibility for all persons through this primary entrance.
- d) The building does not have a designated drop off area near the front entrance.
- e) The quantity of parking spaces is limited. Parking areas are typically located lower than the first floor level. Ramps or stairs are required to reach the main level.
- f) A small kitchen exists at the lower level but has not been used for years. The kitchen is not commercial grade and would require extensive investment to renovate to a modern commercial kitchen.
- g) Planning accessible improvements for historic buildings can be challenging. Older buildings often present obstacles for aesthetic and practical placement of ramps. Door threshold heights and minor level changes all need to be identified and resolved.
- h) Structural alterations can prove to be exceedingly expensive. The building is built of unreinforced unit masonry. Should an emergency shelter be incorporated, building code requires extensive structural alterations to internally brace the building against seismic forces. These types of structural improvements to an older building include, but are not limited to the following: connecting floor and roof diaphragms to surrounding exterior vertical walls with steel angles, steel channels, and through bolts on the inside face of the wall; several instances of steel X-bracing placed at the inside face of walls along the entire perimeter of the building; removal of flooring to ensure adequate nailing patterns exist between diaphragms and supporting wooden joists, and new concrete footings at the basement level to tie the cross bracing to the ground plane.
- i) The existing site is bound by wetlands and flood zones at the rear of the property. Public Safety Officials have indicated that a secondary vehicular access route is necessary for the proposed Senior Center and emergency shelter use. If available to the Public, a secondary entrance/ exit from the site would also decrease traffic impacts on Main Street. Based on current property configuration and locations of wetlands and flood zones a secondary site access is very difficult and would require property acquisition or a right-of-way over adjacent private land.

SUMMARY AND RECOMMENDED IMPROVEMENTS

The Prescott School offers a central location in Town. Individual classrooms can be used for program spaces. However, the lack of an elevator to interconnect functions on each floor, and the cost of seismic upgrades are considerable negatives. Suggested improvements to the existing facilities include:

- a) New 3-stop elevator with possible exterior grade access from accessible parking.
- b) Accessible kitchen.
- c) Accessible upgrades, such as improvement to the toilet rooms.
- d) Code compliant handrails at stairs, adjustments to tread/riser interface (stair nosing).
- e) Power assisted accessible door.
- f) Removal and reconstruction of the deteriorated exterior wooden egress stairs at the rear of the building.
- g) New accessible ramp to the main entrance.
- h) Designated vehicular drop off area that is near the same level as the assessable building entrance. Seniors would benefit from being driven to the Senior Center by a friend, and to a designated drop off area that is near the accessible main entrance. With this arrangement, seniors or persons with mobility impairments can then navigate on their own from the automobile to the accessible building entrance.
- i) At exterior stair to basement level, install new guard railings and stair railings.



Photo PS4A: Main entrance is not accessible.



PS4B: Side entrance is equipped with an accessible ramp.



Photo PS8D: Building contains a large open gymnasium suitable for multipurpose activities.



Photo PS8B: Building contains numerous individual spaces available to be programmed for senior activities.



Photo PS4E: Non-compliant features include railings, varying riser heights, and projected stair nosings.



Photo PS4C: Designated accessible entrance door is heavy, lacks power assist, contains non-compliant threshold.



Photo PS8B: Entire building has been retrofitted with new energy saving insulated glass windows.



Photo PS9C: Near main entrance is level and could serve as accessible parking with small ramp to entry.



Photo PS7B: Roof is good condition.



Photo PS3C: Exterior egress stairs at the rear of the building and serving the gymnasium are not code compliant.



Photo PS3E: Non-compliant guard rails and handrails at stair.



Photo PS5: Existing conditions at lower level.



Photo PS4: Accessible toilet room facilities.

1. GENERAL MECHANICAL

Prior to our investigation, a building condition study had been conducted in March of 2012. We were provided this report prior to our evaluation. During a May site visit, existing mechanical systems were observed, deficiencies and conditions were noted, and the following narrative is the result of this effort. The provided building report was also reviewed concurrently, agreed with, and provided a good baseline for this building assessment.

2. FIRE PROTECTION

The existing building does not provide means of an automatic fire suppression system. Several fire hose connections were located in corridors spaces, the hoses have since been removed and it was undetermined if the connections were active.

The addition of a fire suppression system must be designed within the following constraints and criteria.

- a) Water service for building would not be of adequate size for a new building suppression system.
- b) Space would need to be provided for a fire protection room. Flow tests would need to be conducted to determine available services for the building and to determine if a fire pump and/or water tank would be necessary.

3. PLUMBING

The following items were taken from the report previously submitted; these items were reviewed on site and found to be accurate.

- a) The building is served by a 2" water service that enters through the front of the building. (Photo PS3A)
- b) Sanitary sewage for the building is routed to a tank with duplex grinders at the rear of the building. Both pumps are about 20 years old and one grinder was re-built about 5 years ago.
- c) The original school kitchen contained a three pot sink discharged into a grease trap in the adjacent boiler room. Since the kitchen has been decommissioned and equipment has been abandoned in place. It should be noted that the grease trap in the boiler room is of unknown age but appear fairly old. (Photo PS3C).
- d) An issue with the kitchen drainage was reported, as the kitchen has not been operational for some time it is unknown if a problem will be present with the existing piping.

In addition to the report the following items were noted:

- e) Domestic water is supplied to the building through a single Bradford White storage type electric water heater. Water heater did not have means for absorbing expansion from the system, means of tempering supply water temperature to the building, or a means of recirculation to provide on demand hot water to remote fixtures. It was discussed while on site that the lack of recirculation was an issue for the building and remote restrooms have excessive wait times and water usage for hot water. (Photo PS3E)
- f) Building flat roof storm leaders travel through the building. No issues were observed or discussed with the roof drainage system during this site investigation.
- g) Building currently utilizes natural gas for steam boiler fuel. A gas service is located on the exterior of the building with a 2" main entering the building. Analysis would need to be conducted to determine if additional capacity may be present for future equipment. (Photo PS3G)

4. HVAC

The following items were taken from the report previously submitted; these items were reviewed on site and found to be accurate.

- a) Based on the existing conditions report the existing steam boiler was replaced in 2010. This was confirmed by onsite staff as well as the boiler serial number indicating a date of manufacturer of 2010. (Photo PS4A).
- b) The existing radiators have been repaired and maintained in serviceable function. Outdoor air dampers have been converted from manual to mechanical operation. (Photo PS4B)
- c) Radiators have individual steam traps. If steam heating is continued to be used, all traps should be inspected and repair/replaced as required.
- d) Temperature for the building is maintained through a single thermostat located on the first floor in the common corridor. No means of independent or zone temperature control is present.
- e) There are three condensate receivers located in the building, two are remote and one is primary. All are in working order.
- f) Restrooms were observed to be venting into the corridor which is not permitted by code. Discharge from the restrooms is required to be external to the building.
- g) Minimal mechanical ventilation is provided in the building. Fan have been installed through the sidewall of the building within corridors to provide some exhaust to spaces, however the building relies on primarily on natural ventilation through windows and unit ventilators when outdoor weather permits.

In addition to the report the following items were noted:

- h) Majority of the building piping is original, several retrofit projects have been done including outdoor air damper modulation through the old shaft used for the foot peddle.
- i) A small window type air conditioner is providing some tempering to the server room. The space temperature remains very warm; however equipment has not had problems up to date.
- j) Original ventilation air shafts have been closed off completely.

5. MECHANICAL DEFICIENCIES

- a) The Building does not contain a fire suppression system; under any significant renovation a fire protection system would need to be incorporated. It would be reasonable to assume that the addition of the fire protection system would be required throughout the building, even under a partial renovation.
- b) Restroom exhaust venting into adjacent corridors must be corrected. New roof mounted exhaust fans, set on occupancy time clocks could be provided. Ductwork would need to be routed from the restrooms, through the building and to the roof mounted fans.
- c) The existing mechanical ventilation system is inadequate. While natural ventilation is code compliant, it is rarely used during the winter and summer months. The addition of a make-up air unit would be required to provide this ventilation. Due to the usage of the spaces, energy conservation measures would be required to pre-temper ventilation air, increasing initial costs but reducing operational costs.
- d) Existing Cafeteria/Kitchen would need to be rehabilitated to include new commercial kitchen cooking equipment with associated hoods, fire Suppression, and make-up air systems.

- e) If the building were to be utilized as an emergency shelter a new gas fired generator would be incorporated onto the site. An on-site, dependable, stored fuel source such as liquid propane would be required.

6. RECOMMENDED BUILDING IMPROVEMENTS FOR SENIOR CENTER USE

- a) Existing terminal units including radiators and unit ventilators throughout the building are beyond their expected useful life expectancy. Terminal equipment should be removed and replaced with a dual coil heating/cooling fan coil system and 100% outdoor air unit with energy recovery. Hot water would be provided from the current steam boiler through a shell and tube heat exchanger and chilled water through a roof mounted chiller.
- b) With the above system recommendation, the addition of a Building Management Control System would need to be incorporated to control individual zones, the overall ventilation systems, the new hydronic systems and the existing steam boiler system.

7. ADVANTAGES OF PRESCOTT SCHOOL FOR USE AS SENIOR CENTER

- a) The boiler heating system for the building currently exists. The previous recommendation for a steam to hot water heat exchanger is viable, space constraints would need to be addressed with respect to location for both pumping racks and a shell and tube heat exchanger. This would provide a significant decrease in upfront costs for utilizing the building.
- b) Some portion of the existing kitchen system may be able to be utilized. The 3 pot sink appeared to be in fair/good condition. A new grease interceptor would be required and during this construction the concern/deficiency with the existing sanitary line could be addressed.
- c) The flat roof currently does not contain any mechanical equipment. This building will require several pieces of roof mounted equipment to provide heating, cooling and ventilation to the space. With a clear open space equipment could be installed in optimal locations.

8. DISADVANTAGES OF PRESSCOTT SCHOOL FOR USE AS SENIOR CENTER

- a) This is the only location that does not have a water service sized for a fire suppression system. The incoming water service of 2" will not be adequate and a new water main would need to be brought to the building. In addition, the entire building would require protection with the addition of a fire protection system, and not just the space intended for use as a Senior Center.
- b) As the roof currently does not have any roof mounted equipment the structure would need to be analyzed. HVAC equipment can weigh thousands of pounds and the roof structure most likely was not designed to support that kind of weight. As a result additional structural members may be required. An engineering evaluation and analysis that establishes the adequacy of the structure should be prepared by a registered professional engineer.
- c) Existing high ceilings do not provide space between floors to conceal mechanical equipment, ductwork, piping and controls. While space is present, exposed mechanical items will give a more industrial feel to the building. If drop ceilings are installed some of the existing historical and aesthetically pleasing portions of the building would be covered over.
- d) Ventilation would be provided as required by the International Mechanical Code (IMC-2015) with energy conservation measures as required by the International Energy Conservation Code (IECC-2015).



Photo PS3A: Incoming 2" Water Service with pressure reducing valve and backflow prevention.



Photo PS3C: Existing Grease trap located in boiler room adjacent to kitchen.



Photo PS3E: Existing Domestic Water Heater.



Photo PS3G: Existing Gas Service to the Building.



Photo PS4A: Existing Steam Boiler.



Photo PS4B: Existing Radiator Which Has Been Repaired.

1. GENERAL ELECTRICAL

Prior to our investigation, a building condition study had been conducted in March of 2012. We were provided this report prior to this evaluation. During a May site visit, existing electrical systems were observed, deficiencies and conditions were noted, and the following narrative is the result of this effort. The provided building report was also reviewed concurrently, agreed with, and provides a baseline for this report. The overall condition of the building electrical systems would be considered in working condition; however, the majorities of the electrical systems are beyond their operating life-cycle and are limited in their ability to accommodate any substantial renovation.

2. EXISTING ELECTRICAL CONDITIONS

The existing service consists of a 400A 120/208V Frank Adams Distribution Panel. The service panel is located in a corridor leading to an old utility vault in the basement. The service is fed overhead from a pole mounted transformer located across the street via an underground feeder. Several sub-panel are located throughout the facility, some of these have been previously upgraded. Many existing panels are installed above the code required height and/or installed in areas without the proper working clearance. (Photo PS-1)

The lighting throughout the facility consists of both surface and pendant mounted fluorescent strip type lighting, recessed prismatic and parabolic type fixtures, and low bay type lighting in the gym area. The lamping is both T12 and T-8. In several areas, fixtures have exposed lamps due to the type of the fixture and/or missing or broken lenses. (Photos PS-2 and PS-3)

The facility is equipped with egress lighting, however, as installed will not comply with the latest requirement an NFPA 101 Life Safety Code and Massachusetts Building Code 780 CMR standard. (PS-4)

The Fire Alarm System is a Model Silent Knight zoned system. Detection coverage for the most part appears adequate. The age of devices may be approaching replacement requirement. Audio/visual coverage is present but inadequate in its coverage.

The building has an operation Telecommunication system, both wired and Wi-Fi systems are available. Installation of cables is surface and exposed and unprotected. (PS-5)

3. CODE DISCREPANCIES

The facility must comply with the Massachusetts Electrical Code 527 CMR 12 (MEC). Any substantial renovation or addition will require the facility to comply with the latest version of the International Energy Conservation Code (IECC)

Emergency/egress lighting may not comply with the present NFPA 101 Life Safety Code and Massachusetts Building Code 780 CMR standards and should be supplemented with newer LED type fixtures as well as adding additional exit lights where required. The egress lighting needs to be measured with light meter to assure proper levels are met. Additional battery pack lighting will be needed since the present system appears to have some areas which are not adequately lighted.

The original electrical panels are beyond their design service life. The existing service will have to be upgraded to supply the additional power requirements associated with any renovation and future elevator. Sub-panels will have to be replaced and relocated to allow for proper working clearances, and mounting height.

The existing lighting does not meet the standards expressed in the Illuminating Engineering Society of North America (IESNA) for recommended quality of lighting. The present lighting is inefficient and antiquated. Present lighting will not meet the present IECC requirement. The fluorescent and incandescent lamping will not meet the required power density and the fixtures will need to be equipped with dimming and lighting controls. LED type lighting, which is equipped with dimming, is recommended to comply.

General power outlets are located in each room however, limited in quantity and accessibility. In general the locations of the outlets do not adequately serve the equipment in each room. Future renovations will require additional branch circuits and general outlets.

The telecommunication cables are run exposed and unprotected. The present system does not comply with the Electronic Industries Alliances (EIA)/Telecommunication Industry Association (TIA) standards which should be met as a result of any renovation. Additional telecommunication connections are needed to eliminate the need for draping cables across the floor and walls. A proper wire management system will be necessary, as well as proper installation of head-end, provider's interface, and grounding.

4. RECOMMENDATIONS

The telecommunication systems should be upgraded to meet the demands of any future renovation.

General power outlets quantity and location will have to be supplemented to accommodate any future renovation.

The electrical service should be upgraded to a 800A 120/208V system. This is to accommodate a future renovation, an elevator, and allow for code improvements of remaining space.

A Lighting control system should be added to allow for multi-schemes in the main assembly areas and compliance with the IECC.

Generally, lighting performance and criteria shall be based upon energy conservation, visual comfort, controlled brightness and functional use of the given space for new lighting – Concurrence with previous report with the addition of Compliance with IECC and Massachusetts addendum requirements. LED type lighting is recommended to best achieve power density levels required by IECC.

The electrical power distribution system should be re-configured to accommodate any new renovations and code requirements. Sub-panels need to be relocate to accommodate proper working clearance and mounting heights.

Upgrade exterior lighting to include additional parking area lighting.

5. ADDITIONAL REQUIREMENTS TO PROVIDE FOR AN EMERGENCY SHELTER

Requirement of Article 708 (Critical Operating Power Systems) of the MEC will be required.

The electrical service equipment, feeders, and critical branch circuits will need to be isolated with the proper fire separations'.

Electrical surge protection will be required on the incoming service panel.

All fire alarm and critical branch circuits will need to be installed in conduit or other methods to provide the proper fire separations'

An emergency generator will be required with an on-site fuel source with enough fuel to operate for 72 hours.

6. ADVANTAGES OF PRESCOTT SCHOOL FOR US AS A SENIOR CENTER

The Prescott School advantage is that some of the newly install power and telecommunications infrastructure can be re-used as part of a Senior Center renovation.

7. DISADVANTAGES OF PRESCOTT SCHOOL FOR USE AS A SENIOR CENTER

The electrical service upgrade needed to accommodate significant major renovation will not be possible without a service upgrade from the utility company. The present location of the service panel may not be large enough to accommodate the new system as well as complying with the latest code requirements, triggered by a renovation.

The service size needs to be larger than the required electrical power requirement needed for the proposed Senior Center, due to the additional future space not utilized by the Senior Center.

Concealment of infrastructure cabling will be difficult if historical ceiling are left exposed.



Photo PS-1: Service age and clearance



Photo PS-2: Exposed lamp fixture



Photo PS-3: Pendant antiquated fixtures



Photo PS-4: Egress Lighting



Photo PS-5: Exposed wiring and inadequate convenient general purpose outlets

ESTIMATE OF PROBABLE PRESCOTT SCHOOL COSTS

Basis of Estimate: Existing Prescott School Evaluation Study
 Repair of Identified Deficient Building Conditions, Code Deficiencies and
 Recommended Improvements for Senior Center Renovations

A. SITE

1.	Repair cracked asphalt paving (Allowance)	5,000.
2.	Additional parking construction @ \$1,700/ car x 80 cars	136,000
3.	Expansion/ modifications to storm water management system	55,000.
4.	Modifications to exterior stair guard railings	8,000.
5.	Accessible ramp to primary entrance, \$685/LF x 26 LF	17,800.
6.	Designate 20 accessible parking spaces close to building	10,000.
7.	Misc. site signage (Allowance)	12,000.
8.	Designated passenger drop off area near primary entrance	500.
9.	Gravel fill rear site for additional parking	150,000.
10.	Secondary Emergency vehicle access (if feasible)	TBD.

B. ARCHITECTURAL

1.	Repair door thresholds	6,000.
2.	Replace Kalwall windows with new windows to match existing	35,000.
3.	Replace egress stair at rear of building	25,000.
4.	New 3-stop elevator, hoistway and machine room.	300,000.
5.	Install power assist device at accessible entrances	6,000.
6.	Modifications to risers, treads, and nosing at egress stairs	6,000.
7.	New commercial kitchen and fit-out	70,000.
8.	Interior renovations \$75/SF x 20,400 SF	1,530,000.

C. STRUCTURAL

1.	Misc. Seismic improvements	150,000.
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D. PLUMBING

1.	Replace/Repair Sanitary Piping Serving Kitchen (Allowance)	5,000.
2.	Replacement of Existing Grease Interceptor (In Slab)	15,000.
3.	New Gas and Water Piping	25,000.
4.	Miscellaneous Plumbing Reconfiguration/Repair	15,000.

E. FIRE PROTECTION

1.	Wet Pipe Automatic Sprinkler System (20,400 S.F.)	102,000.
2.	4" Dia. Dry Standpipe for two floors	18,400.
3.	New 6" Water Service to the Building	Separately funded.

FEASIBILITY STUDY

PRESCOTT SCHOOL

F. HVAC

1.	100% Outdoor Air Unit with Energy Recovery	40,000.
2.	Restroom Exhaust Systems Vent to Roof	20,000.
3.	Replacement of Existing Terminal Equipment w/ FCU's (39 Zones)	100,000.
4.	Shell and Tube Steam to Hot Water Heat Exchanger & Accessories	40,000.
5.	Chillers for Fan Coil Units	80,000.
6.	Ductwork and Piping	150,000.
7.	Energy Management System and Controls	50,000.
8.	Basement HVAC Costs Included in Architectural S.F. Costs	

G. ELECTRICAL

1.	Replace lighting fixtures with exposed lamps	9,000.
2.	Upgrade existing egress lighting for code compliance	10,000.
3.	Upgrade existing Fire Alarm System for compliance	13,000.
4.	Protection of Telecommunication cabling	5,000.
5.	Utility cost for service upgrade	25,000.
6.	Upgrade distribution system to 800A 120/208V	55,200.
7.	New 225 KW Diesel Emergency Generator (includes site cost)	92,000.
8.	Additional emergency distribution equipment	20,000.
9.	Additional branch circuit requirements	<u>16,000.</u>

H. TOTAL PROJECT BUDGET SUMMARY

\$ 3,427,900.

I. CONSTRUCTION FACTORS

1.	General Conditions/ OH & P @ 15% =	<u>514,200.</u>
	Sub-Total:	\$ 3,942,100.
2.	Study/ Design Contingency@ 10% =	<u>394,200.</u>
	Sub-Total	\$ 4,336,300.
3.	Escalation to Mid-Pt. Const. (9/17) @ 5% =	<u>216,800</u>
	Sub-Total	\$ 4,553,100.
4.	Construction Change Contingency @ 8% =	<u>364,300.</u>

J. TOTAL CONCEPTUAL CONSTRUCTION BUDGET:

\$ 4,917,400.

K. PROJECT DEVELOPMENT EXPENSES:

1.	Architectural / Engineering Services: (DCAM Schedule)	400,000.
2.	Owner's Project Manager (MGL c149§ 44A1/2)	140,000.
3.	Legal / Bonding Counsel (Assumed)	30,000.
4.	Printing / Reproduction	18,000.
5.	Legal Advertising / Bid	1,000.
6.	Clerk of the Works	OPM.
7.	Construction Materials Testing	6,000.
8.	Utility Expenses	23,000.
9.	Furniture, Fixtures & Equipment (Allowance)	180,000.
10.	Tel / Data Systems (Est.)	<u>60,000.</u>

Sub Total: \$ 858,000.

11.	Project Development Contingency @ 5%:	<u>42,900.</u>
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Total Project Development: \$ 900,900.

L. TOTAL CONCEPTUAL PROJECT BUDGET SUMMARY: \$ 5,818,300.

M. QUALIFICATIONS

1. This Summary of Probable Project Cost is based on a non-specific Building and Site Design and the following assumptions:
 - a. Normal Construction schedule has been used to prepare this Summary.
 - b. Premium time costs are not included. Costs are based on forty-hour workweek, Mon. thru Fri.
 - c. This Summary is based on prevailing wage rates.
 - d. No costs are included for disposal or remedial work on contaminated soil.
 - e. An Allowance is not included for hazardous materials.
 - f. Items that could impact this Summary are:
 - 1) Unforeseen subsurface conditions
 - 2) Restrictive technical specification
 - 3) Non-competitive bid conditions (less than five qualified bids)
 - 4) Sole source specification of materials or products
 - 5) Delays beyond the project schedule or **May 2017 bid date**
 - 6) Accelerated completion
 - 7) Unforeseen permitting conditions
2. This opinion of Probable Budget Summary of Project Cost is made on the basis of the experience, qualifications and best judgment of RAI's Professional Staff. This Summary is for Budget purposes only. Actual construction value is determined after the completion of the Construction Documents and the Bid Award process. Variance of +/- 5% of the Summary amount is probable.

GROTON SENIOR CENTER
GROTON, MA

EXISTING CONDITIONS ASSESSMENT



C. EXISTING GROTON SENIOR CENTER

1. GENERAL ARCHITECTURE

The existing Groton Senior Center is located at 163 West Main Street, Route 225, and was constructed circa 1990 as a VFW Post. The building contains 6,400 total gross square feet divided equally on two levels. The lower level was built with rear on-grade access requiring the main upper level to be built approximately six (6) feet above grade requiring stairs and extensive ramping to enter the building.

The existing Senior Center is a designated Emergency Shelter for the Town of Groton. The Senior Center must provide emergency housing and meals for Townspeople during local disasters and emergencies. The Senior center is also a Town Voting/Polling location.

2. SITE

The Senior Center site consists of approximately six (6) acres which is bisected by wrangling brook and associated wetlands or wetland buffer areas. The Senior Center's current development area is approximately 1.2 acres.

The building is located in a heavily wooded area on a relatively flat site. The site contains asphalt parking areas for 70 vehicles, three (3) of which are designated handicap accessible. The current site provides a large community garden, walking trails originating on the property, and is adjacent to a scenic wetlands to the rear of the Senior Center.

- a) The site is supported by an 8 inch water main, single phase overhead electrical service, overhead telephone and cable service, an on-site sanitary disposal system and on-site stormwater management system with detention basins.
- a) Users of this Senior Center facility have reported favorable conditions regarding location, access to the site and local traffic conditions.

3. BUILDING CODE

The existing Groton Senior Center building may have been a code compliant building when first constructed, but several features of the present building are not compliant with current building codes, most importantly accessibility codes. Applicable building codes today include 780 CMR – the Massachusetts State Building Code, and the 2009 International Existing Building Code. The existing building is in overall generally good and serviceable condition. The posted occupant load is limited at 70 persons maximum.

Observed code deficiencies include, but not limited to the following:

- a) Exterior egress stair width is 36 inches and less than Code required 44 inches for an occupancy of more than 50 people.
- b) Exterior egress stair is not protected from accumulating ice and snow and present a safety risk in emergencies and poor weather.
- c) Egress stair railings that do not have the required return at the end of the railings and are not code compliant.

- d) Artwork is installed in interior stairwell and creates a code violation for an increased flame spread condition.
- e) Interior egress stairway is being used for storage which is a safety risk to occupants and a violation of code.
- f) Interior and exterior stair tread and riser dimensions would not be compliant with current code.
- g) Interior fire-rated stairway doors are propped open in violation of code.
- h) Penetrations around openings in fire-rated construction are not properly sealed, firestopped or protected.
- i) Privacy and acoustical/sound walls, quilted art and upholstered furniture should be reviewed for an increased flame spread and smoke development risk in Meeting Hall.
- j) Meeting Hall space has inadequate fire alarm horn and strobe devices and the existing device is installed above code required height.
- k) Emergency lighting over exterior egress stair and other building exits appear insufficient to meet code requirements.

4. ACCESSIBILITY

Overall, the building lacks many accessible features per MA Building Code 780 CMR, MA Architectural Access Board (MAAB) Regulations 521 CMR, and the American's with Disabilities Act (ADA). The MAAB Regulations state that all publically visited areas of the building will need to be made accessible per the most current MAAB Regulations when building permitted costs over a three year period exceeds 30% of the full and fair cash value of the building which is generally determined to be the 100% assessed building (only) value. The existing Senior Center building is currently assessed at \$143,700. Therefore full compliance with MAAB Regulations would be required if building permit work performed on the Senior Center exceeded \$137,190 ($\$143,700 \times 0.30$).

There were existing barriers to the accessibility observed including, but not limited to the following:

- a) The building does not have an elevator or accessible interior access connecting the (2) floor levels requiring handicap Seniors to exit the building and walk on exterior ramps for more than 200 feet.
- b) Exterior ramp to main entrance is very long at 85 feet long and is not protected from ice and snow.
- c) Main entrance ramp handrails are not accessibility code compliant.
- d) Toilet rooms do not meet all accessibility code requirements.
- e) Sloped walk to lower level is not a compliant ramp. Ramp exceeds permissible slope. There are no compliant handrails on both sides of ramp.
- f) Lower level entrance doorway threshold height exceed code requirement.
- g) There is insufficient clearance and fixture heights at accessible urinals.

- h) Toilet grab bars do not meet accessibility code for size and construction.
- i) Sink mounting heights were higher than permitted by code.
- j) There is insufficient floor clearances in front of some accessible toilet fixtures.
- k) Mirrors and toilet accessories do not comply with accessibility code locations and some heights.
- l) Door hardware does not comply with accessibility codes.
- m) Kitchen does not have any handicap accessibility features including heights, clearances, fixture and equipment types, controls and reach limitations.
- n) Pass-through between kitchen and dining/hall at non-accessible height.
- o) Piping under accessible sinks are not protected or insulated for safety.
- p) Some door clearances on strike/handle side of door are less than required by accessibility code.
- q) Accessibility room signage not installed in compliant locations.
- r) Accessible parking signage is not a correct height.
- s) No van accessible parking or signage provided.

5. LOWER LEVEL

The lower level contains program spaces, storage functions, a mechanical room, and electrical/utility room, toilet rooms and a large open multi-purpose area. Two program rooms each containing about 400 square feet exist, but are currently being used as general storage. The lower level is constructed with a concrete slab on grade. Finishes include vinyl composition floor tile, 2 x 4 suspended acoustic ceiling tile, and painted gypsum wallboard. Stairs are carpeted. Generally interior finishes are serviceable. Carpet and acoustical ceiling tile are approaching replacement age.

- a) Insufficient storage space requires material and equipment storage in program space.
- b) Insufficient program space does not allow for full or preferred programming.
- c) Lack of reasonable accessibility makes lower level under utilized. Minimum 8'-0" ceiling height limits possible programming and activities in larger multi-purpose area.
- d) Surrounding grade at doors is level or slopes toward building resulting in ponding water, icy conditions in winter, and ongoing deterioration of door thresholds and frames.

6. UPPER LEVEL

The upper level contains the main entrance and foyer, toilet rooms, business offices, a residential sized kitchen, and a large open meeting hall. Interior walls and several ceilings are generally painted gypsum board. Interior finishes appear in reasonable condition, with some worn areas in need of modernization. Interior floor finishes include wood, vinyl composition tile, and carpet.

- a) Due to large contiguous Meeting Hall space to other functional areas there are poor acoustics between spaces and within the Meeting Hall. Acoustical treatments are insufficient and excess noise is a constant complaint of Seniors. Separation cracks in gypsum board joints observed at peak of Meeting Hall ceiling.
- b) Due to poor acoustics and multiple adjacent functions the main Hall cannot support multiple / simultaneous programs or activities.
- c) Similar to lower level there is insufficient storage space on the upper level and material and equipment storage occurs almost everywhere.
- d) There is insufficient program, activity and functional space on upper level to adequately provide services and requested programming and activities for all Seniors.

7. EXTERIOR ENVELOPE

The exterior roof is gabled; roof covering is asphalt shingle. Exterior walls are wood stud frame with painted plywood siding. Lower level is below grade on (3) sides with concrete foundation walls and (1) wood frame wall on grade level rear wall. There are few windows in the building. Windows are original wood casement type, in fair condition with some inoperable hardware. Roofing and siding appear generally serviceable. Exterior doors are also in good to fair condition.

8. ADVANTAGES OF THE CURRENT SENIOR CENTER

- a) Senior Center site offers scenic nature areas including a pond and wetland and existing nature trails.
- b) Site offers large area used for popular gardening activities.
- c) No identified traffic related issues with current Senior Center site location reported.
- d) The building contains two multi-purpose spaces to accommodate current programs, activities and events. Very large gatherings must be held off-site.
- e) Renovation and expansion/addition to the existing Senior Center may be feasible with some possible savings achieved. Further study is required to verify the feasibility of a renovation and addition to the existing Senior Center.

9. DISADVANTAGES OF THE CURRENT SENIOR CENTER

- a) Accessibility is a major issue of the existing Facility. The building does not provide elevator service between the two levels. Mobility impaired Seniors must travel up long inclined ramps to reach the accessible entrance for each floor.
- b) Handicap accessibility between floor levels requires exiting the building and walking along exterior, uncovered ramps and walks in sometimes hazardous conditions. The lack of an elevator can inhibit Seniors from participating in a full range of Senior activities.
- c) The proposed Space Needs Analysis design program area of 15,000 square feet does not fit within the available 6,400 gross square feet of building area, requiring an addition of approximately 140%.

- d) The existing kitchen is not handicap accessible and inadequate for the population served. Large events must be held off-site.
- e) The kitchen can be noisy since it is open to other adjacent program spaces. During food preparation and cleanup activities, the kitchen generates noise and can be disruptive to adjacent program activities. As a result, kitchen activity and other activities are not scheduled to occur at the same time, and this negatively affects the availability of program spaces.
- f) All deliveries and waste disposal, including kitchen/food waste, must go through Upper Level main entrance as it is the only reasonable means to access Upper Level.
- g) The main open space on the Upper Level is not large enough to accommodate larger groups of Seniors. As a result, the Senior Center activities sometimes need to move to the Groton Country Club (GCC) where a large open space is available. However, such activities are limited to only 3 times per year at the GCC.
- h) Senior Center program and activity space is severely limiting. Large simultaneous activities are not possible. At times Seniors have been turned away due to limited space at popular activities.
- i) At the Upper Level, Seniors who are speaking with staff at the business offices suffer from poor acoustical privacy since the main open Hall area is directly adjacent. This can impede private discussions between staff and Seniors.
- j) The lower level contains only one window. More natural light would be desirable.
- k) Gypsum board behind one or two toilets has water damage and should be replaced. Vinyl wall base is also missing in some toilet areas.
- l) A copy machine is currently occupying needed program space because there is no other area available for this function. Copier contributes to noise complaints.
- m) Storage areas are insufficient, therefore materials and equipment needing storage are being placed into program areas. Storage areas for Emergency Shelter equipment and supplies occupies functional Senior Center program areas.
- n) The building does not have a designated or covered vehicular drop-off area to assist Seniors to safely enter the building.
- o) The main entrance door is not equipped with power assisted automatic door openers to assist Seniors entering the building.
- p) There is no entrance vestibule or air-lock to prevent uncomfortable cold or hot drafts entering the building creating additional comfort issues for Seniors.
- q) The rear roof gutter appears to have been removed or was never present. Exposed adjacent wood trim and finish appears to have started to deteriorate and should be examined more closely.
- r) Icing and water dams appear to have been an issue as electric snow melt cables were installed on all building eaves. Cable appears to require additional repair.

- s) Window operation is difficult or to be avoided due to poor or non-operative window hardware reducing opportunity for improved ventilation and fresh air.
- t) Exterior plywood siding is deteriorating above through-wall air conditioners at Lower Level.
- u) The use of the Senior Center as a designated Emergency Shelter makes the Senior Center an "Essential Facility" or one that is intended to operate and function in all types of emergencies or disasters. "Essential Facilities" have additional Code requirements including higher seismic and lateral load (wind) resistance. Additional Study of the existing structure is required but structural seismic retrofitting and improvement of the structure may be necessary.
- v) Senior Center entrance and main floor is located approximately 6'-3" above grade and requires stairs or ramp access which provide Seniors a very poor, unattractive and difficult access to the Center.
- w) Note that in any possible renovation and expansion of the Senior Center Facility the anticipated future function area of the existing Senior Center should be reduced by approximately 20% due to inefficiencies in applying specific size program spaces to an existing structure. To be cost effective new program areas may be required to occupy somewhat larger existing construction spaces rather than reconstruct all sub-dividing walls. Therefore, the existing 6400 gross sq. ft. Senior Center should permit approximately 5330 GSF (6400/1.20) of cost effective program area to be planned within the existing Facility.
- x) Observed deteriorated concrete curbs adjacent to sidewalk areas and disturbed / dislocated asphalt curbs. This ongoing deteriorating condition will continue to produce small stones and aggregate debris within the walking area, and may create tripping hazard to persons.

10. SUMMARY

The existing Groton Senior Center is the newest of the 3 structures being considered for a future improved Senior Center Facility. The building is too small to accommodate the Senior Center program and would need to be expanded to meet the projected programmatic space needs. Reportedly, the present site offers a convenient location for Seniors, and supplies a reasonable amount of parking area on a relatively flat site.

The possible renovation of the existing Senior Center would present several significant issues including the following concerns:

- a) What is to occur to existing Senior Center programming and functions during any proposed renovation. It may be feasible to build an Addition and relocate the Center into the Addition while the original Center is renovated but this will increase the cost of the overall renovation project. Alternatively the Senior Center could relocate programming to other Facilities if possible and available, but this too is likely to be at an increased expense.
- b) The existing Senior Center main floor is located +6 feet above grade and would not align with a new grade level floor in an Addition. Additional stairs and elevator stops would be necessary to provide access to possibly (3) levels with a corresponding lower connectivity and flow of functions spread across (3) levels which would be less advantageous than a (1) or even (2) level facility.
- c) The Senior Center is a designated Town Emergency Shelter. A renovation of this "Essential Facility" will require structural and seismic improvements to the building that would be extensive.



Photo GSC1: Groton Senior Center



Photo GSC02: Groton Senior Center



Photo GSC03: Groton Senior Center



Photo GSC04: Storage below Main Entrance deck



Photo GSC05: Groton Senior Center



Photo GSC06: Non-Compliant exterior emergency exit signs



Photo GSC07: Senior Center entrance ramp



Photo GSC08: Senior Center entrance ramp



Photo GSC09: Main entrance stairs to Senior Center



Photo GSC10: Non-Compliant accessible ramp to Lower Level



Photo GSC11: Parking and Gardening Area



Photo GSC12: Deteriorated concrete curb near Main Entrance.



Photo GSC13: Main Entrance Lobby and Reception Desk



Photo GSC14: Reception Desk



Photo GSC15: Small Kitchen



Photo GSC16: Small Kitchen and Storage



Photo GSC17: Meeting Hall



Photo GSC18: Temporary / Portable acoustical partitions in Meeting Hall



Photo GSC19: Non-Compliant Handicap Accessible Toilet



Photo GSC20: Non-Compliant Handicap Accessible Lavatory and Mirror



Photo GSC21: Water damaged gypsum board at Toilet



Photo GSC22: Non-Accessible Urinal



Photo GSC23: Office Area



Photo GSC24: Lower Level Multi-Purpose Room



Photo GSC25: Interior Stair used for Storage



Photo GSC26: Interior stair used for Storage



Photo GSC27: Lower Level Storage



Photo GSC28: Lower Level Storage for Voting and Emergency Supplies



Photo GSC29: Unprotected opening in fire-rated wall construction



Photo GSC30: Unprotected openings in fire-rated ceiling construction



Photo GSC31: Deteriorated wood fascia trim and soffit
Loose snow melt wiring system



Photo GSC32: Deteriorated wood fascia trim
Loose snow melt wiring

1. GENERAL MECHANICAL

During a May site visit, existing mechanical systems were observed, deficiencies and conditions were noted and the following narrative is the result of this effort. The building consists of two levels, the ground floor being used for an exercise/common area, service entrances, and storage and the 1st floor level being used for public space. In general and overall condition of the building mechanical systems would be considered in serviceable condition but approaching, or in most cases exceeding, the expected useful life expectancy of the equipment.

2. FIRE PROTECTION

The main for the fire protection service is a 6" water line up through the floor slab, located within a mechanical closet on the ground floor. This 6" incoming water service immediately nozzles down into a 4" main for the building. As the attic space is outside of the thermal envelope a dry pipe system has been installed with the compressor located in the same mechanical closet. In general no issues were noted with respect to the existing coverage, although the entire attic was not observed.

Any expansion of the existing system would require flow tests and hydraulic calculations to determine if adequate water supply/pressure could be achieved through the existing incoming water service.

3. EXISTING PLUMBING DOMESTIC WATER SYSTEM

The building's domestic water systems are comprised of all systems requiring potable water throughout the building. Both levels of the building contain fixtures which are still in use. Exterior to the building is a large garden area with exterior seasonal hoses provided for watering.

- a) A 2" potable water service with a reduced pressure backflow preventer also comes through the slab separate from the 6" fire protection main previously discussed. (Photos SS3A(1) and SS3A(2)).
- b) The domestic hot water system consists of a direct fired water heater with 40 gallons of storage and 40,000 Btu/hr firing rate. The water heater is manufactured by State Industries, Model GS640YBVIT 100 and a date of manufacturer of 04/23/2010. Direct fired domestic water heaters have a useful life expectancy of 15 years with regular service and appeared to be in good condition. (Photo SS3B)
- c) The following plumbing fixtures are connected to the building domestic water system. Restrooms are located on both the upper and lower floors. The ground level has both men's and women's restrooms with one (1) water closet and one (1) lavatory each. A janitors closet adjacent to the restrooms has a janitors sink on a pedestal. The first floor has a women's room containing 3 water closets and 2 lavatories. The Men's room has two (2) water closets, one (1) urinal and two (2) lavatories.

4. EXISTING PLUMBING SANITARY SYSTEM

The building sanitary systems shall be comprised of any and all waste water plumbing systems conveying waste products and solid materials to an external sewer system. Piping system does not carry storm, surface, clear water or ground water.

- a) The janitor's closet contains the existing 4" sanitary pipe service exiting the building. The pipe is currently propped up with a wood 2x4 for support. (Photo SS3A(1)).
- b) The kitchen has a residential style two-bowl sink with grease trap and residential style dishwasher located under cabinet. (Photo SS4B).
- c) The following plumbing fixtures are connected to the building sanitary system. Restrooms are located on both the ground and first floors. Ground level has both men's and women's restrooms with one (1) water closet and one (1) lavatory each. A janitors closet adjacent to the restrooms has a janitors sink on a pedestal. 1st floor has a women's room containing 3 water closets and 2 lavatories. The Men's room has two (2) water closets, one (1) urinal and two (2) lavatories.

5. EXISTING PLUMBING NATURAL GAS AND VENTING SYSTEMS

Natural gas piping system shall consist of all piping conveying natural gas to gas fired appliances throughout the building. Venting systems include the discharge of products of combustion from these gas fired appliances to the point of discharge from the building.

- a) The natural gas supply splits at the gas meter and two separate lines enter the building above the ceiling of the mechanical closet on the ground floor. (Photos SS5A(1) & SS5A(2)).
- b) A gas fired generator is located on the west side of the building. The unit appears to be too close to the building and does not have a vent extension to above the roof line. One of the two gas pipes which enter the building may have been dedicated to the generator. (Photo SS5B)
- c) The kitchen contains two residential style stoves with 4 gas burners each. (Photo SS5C)
- d) An existing heating-only gas fired air handling unit is located in the mechanical closet with incoming services. Unit is manufactured by Central Furnaces and has an input rating of 125,000 Btu/hr, and appears original to the building, (Refer to HVAC portion of this report).
- e) Gas service, domestic water heater vent, gas regulators vents, dryer vent, sprinkler alarms, fire department connection and weather hood are all located on the front of the building, adjacent to the ramp. Gas service has a makeshift hood over it which should be removed to allow regulator to vent to atmosphere.

6. HVAC AIR HANDLING SYSTEMS

Building air handling systems shall be comprised of any air movement systems regardless of ability to temper the air temperature, provide fresh (ventilation) air to a space and/or provide any form of filtration.

- a) The heating only gas fired furnace system serving the ground level is located in the mechanical closet containing the building services. The basement cooling is provided by two (2) residential type air conditioners through the exterior wall.
- b) Combustion air for the janitor's closet serving the domestic water heater is through a rough opening with a grille, open to the assembly space on the ground level. Both high and low openings were provided but unfinished.

- c) Two (2) split system air handling units are located in the attic space and the corresponding condensing units are located on a wood platform on the exterior of the building. Unit utilizes refrigerant R-22, with a date of manufacture of August 1990, and is obsolete. This platform elevates the condensing units to approximately 4' above grade. Platform consists of angle iron and wood planking. (Photo SS6C(1) & SS6C(2)).
- d) Restroom exhaust from the 1st floor restrooms terminates above an awning over the main entrance door at an elevation of approximately 10 feet above ramp landing. (Photo SS6D)
- e) Kitchen stoves utilize residential type recirculation hoods with grease filters above each stove. (Photo SS5C)

7. EXISTING SENIOR CENTER BUILDING DEFICIENCIES

- a) The discharge of restroom exhaust is located directly above the main entry door. Exhaust is not permitted to be directed at a walkway and is required to be located far enough from a gravity intake (door or window) to prevent recirculation of odors/gases back into the building. Restroom exhaust would be required to be extended away from the entry door.
- b) To utilize the building as an emergency shelter, the existing gas fired standby generator would need to be replaced with a new gas fired generator due to the size required (Refer to Electrical portion of this report). An onsite, dependable, stored fuel source through the addition of onsite liquid propane would be required.
- c) The existing temporary hood located over the gas generator would be required to be removed to permit for dissipation of natural gas from the gas meter pressure regulator. Extension of the pressure regulator relief vent may be possible in a similar manner to the Prescott School gas pressure regulator vent.
- d) The existing mechanical ventilation system appears to be inadequate. While natural ventilation is code compliant, it is rarely used during the winter and summer months. The addition of a make-up air unit and/or the addition of outdoor air components to split systems would be required to provide this ventilation. Due to the usage of the spaces energy conservation measures may be required to pre-temper ventilation air, increasing initial costs but reducing operational costs.

8. RECOMMENDED IMPROVEMENTS FOR SENIOR CENTER USE

- a) The majority of HVAC equipment in the building is nearing the end of its useful life expectancy. Maintenance on the cooling units could prove costly as the existing units are R-22 refrigerant, which has been discontinued and phased out, reducing replacement parts and materials available. With the useful life expectancy of a split system with DX cooling being about 15 years and oil fired furnaces being between 20-25 years, the equipment will require replacement in the near future or as part of any substantial renovation.

9. ADVANTAGES OF EXTENSION/EXPANSION OF EXISTING SENIOR CENTER

- a) The building currently utilizes a fire protection system. A 6" water service was previously brought to the building, and while flow and pressure would need to be confirmed, the existing system could potentially be expanded into the recommended addition.

- b) With the relatively new age of the domestic water heater, the existing building domestic water system is in serviceable condition and would need minimal repair/improvements to continue serving the existing Senior Center.

10. DISADVANTAGES OF EXTENSION/EXPANSION OF EXISTING SENIOR CENTER

- a) As current HVAC systems do not have mechanical means of providing outdoor air / ventilation air components, additional attic penetrations, attic mounted equipment and controls would be required to provide mechanical ventilation air to the spaces. Ventilation would be provided as required by the International Mechanical Code (IMC-2015) with energy conservation measures as required by the International Energy Conservation Code (IECC-2015).



Photo GSC3A(1): Existing Incoming Fire Protection Service.
Also shows Existing Sanitary Exit from the Building Propped up by Wood



Photo GSC3A(2): Incoming Water Service



Photo GSC3B: Existing Domestic Water Heater. Note High and Low Openings into Adjacent Space for Combustion Air.



Photo GSC4B: Existing Kitchen Sink and Residential Dishwasher.



Photo GSC5A(1): Existing Gas Meter



Photo GSC5A(2): Existing Gas Meter Enclosure. Picture also shows Fire Department Connection, Alarm, Domestic Water Heater Vent, Dryer Vent and through wall intake louver.



Photo GSC5B: Existing Gas Fired Generator Located on the side of the Building. Windows in this picture are operable.



Photo GSC5C: Existing Gas Ranges with Recirculation Hoods.



Photo GSC6C(1): Condensing Units located on Platform.



Photo GSC6C(2): Split system air handling unit located in the Attic.



Photo GSC6D: Restroom Exhaust Terminating Over Entry of Building

1. GENERAL ELECTRICAL

During a May site visit, existing electrical systems were observed, deficiencies and conditions were noted and the following narrative is the result of this effort. The building consists of two levels, the ground floor being used for an exercise/common area, service entrances, and storage and the 1st floor level being used for public space. The electrical systems throughout the facility are in good working condition; however, the components are approaching the end of their design life cycle and offer little in the ability to expand the facility.

2. EXISTING CONDITIONS

The existing service consists of two (2) 200A 120/240V General Electric Panels (A and B). The service panel is located in a room located in the basement. The service is fed overhead from a pole mounted transformer located end of packing lot via an underground feeder. The existing electrical meter shows signs of corrosion and degradation. (Photos ES-1 and ES-2)

An existing gas fired 30 KW generator which feeds a panel C via an automatic transfer switch, which energizes critical circuits such as fire alarm panel. (Photo ES-3)

The lighting throughout the facility consists of surface wrap around, recessed prismatic type, and keyless socket type lights. The fluorescent lamping is both T12 and T-8 types. In several areas, fixtures have exposed lamps due to the type of the fixture and/or replacement of incandescent with compacted fluorescents. The exterior is equipped with wall pack, lantern, and surface incandescent lights. (Photo ES-4 and ES-5)

The facility is equipped with egress lighting, however, as presently install are not in compliance with the latest requirement. The exterior egress lighting appears to utilize the normal lighting with back-up from generator. However, general placement and lighting levels do not appear adequate. (Photo ES-6 and ES-7)

The Fire Alarm System is a Simplex FCI system. The building is equipped with detection and notification devices. Audio/visual devices may not comply with latest candela ratings and audio temporal compliance. Visual alarm coverage may need upgrading. (ES-7)

The building has an operation Telecommunication system, both wired and Wi-Fi systems are available. Installation seems to be operational. The main head-end and demark area is lacking in wire management and may need upgrades to comply with Electronic Industries Alliances (EIA)/Telecommunication Industry Association (TIA) standards. (ES-8)

The facility is equipped with a security and sound system. The sound system has been reported to operate poorly.

3. CODE DEFICIENCIES.

The facility must comply with the Massachusetts Electrical Code 527 CMR 12 (MEC). Any major renovation or addition will require the facility to comply with the latest version of the International Energy Conservation Code (IECC)

Emergency/egress lighting may not comply with the present NFPA 101 Life Safety Code Life Safety Code and Massachusetts Building Code 780 CMR standards and should be supplemented with newer LED type fixtures as well as adding additional exit lights where required. The egress lighting needs to be measured with light meter to assure proper levels are met. Additional battery pack lighting will be needed since the present system appears to have some areas which are not in compliance.

Exterior Egress lighting needs to be upgraded, existing lighting is inadequate and many of the lights show signs of deterioration and/or cracked or broken lenses. Handicap ramp lighting will have to be supplemented to provide adequate coverage.

The existing service will have to be upgraded to a 3-phase 120/208 system to supply the additional power requirements associated with renovation and future elevator. This will require upgrade from the utility to supply 3-phase power, presently only single phase is available at the service pole.

The existing generator will have to be replaced if service is upgraded to 3-phase, as well as for the capacity to provide adequate back-up power for the new facility requirements.

The existing lighting does not meet the standards expressed in the Illuminating Engineering Society of North America (IESNA) for recommended quality lighting. The present lighting is inefficient and antiquated. Present lighting will not meet the present IECC. The T-12 lamping will not meet the required power density and the fixtures will need to be equipped with dimming and lighting controls. New LED type lighting, which is equipped with dimming, is recommended to comply.

4. RECOMMENDATIONS

The existing telecommunication systems should be upgraded to meet the demands of any renovation.

General power outlets quantity and location will have to be supplemented to accommodate any planned renovation.

Sound system should be repaired and/or replace with a suitable and satisfactory system.

The future service should be upgraded to a 600A 3 –phase 120/208V system.

New lighting and control systems should be added to allow for multi-schemes in the main assembly areas and compliance with the IECC.

The electrical power distribution system should be re-configured to accommodate any planned renovations and fire code compliance. Panel numbers could be reduced with the elimination of present sporadic panel locations.

A new gas power generator will be required to accommodate the new service size and voltage (120/208 instead of the present 120/240).

5. ADDITIONAL REQUIREMENTS TO PROVIDE FOR AN EMERGENCY SHELTER

Requirement of Article 708 (Critical Operating Power Systems) of the NEC will be required.

The service equipment, feeders, and critical branch circuits will need to be isolated with the proper fire separations'.

Electrical surge protection will be required on the incoming service panel.

A fire alarm and critical branch circuits will need to be installed in conduit or other methods to provide the proper fire separations'.

An on-site emergency generator fuel source will be required with enough fuel to operate for 72 hours.

6. ADVANTAGES OF REUSING THE EXISTING SENIOR CENTER

The present Senior Center existing branch circuit wiring can be reused.

The existing lighting circuitry can be used with new lighting control system with minimum re-configurations.

7. DISADVANTAGES

The main electrical disadvantage to existing Senior Center is the availability of 3-phase 15 KV power. The existing utility service is single phase, and would require 3-phase 15 KV voltage lines to be installed from the main road.

Upgrades to both electrical service and back-up power will have to be greater to accommodate the power requirement of an addition.



Photo GSC1: Existing Service



Photo GSC2: Existing Meter



Photo GSC3 Existing Generator



Photo GSC4: Existing Interior lighting



Photo GSC5: Existing Exterior Lighting



Photo GSC6: Exterior Egress Lighting



Photo GSC7: Fire alarm and Egress lighting

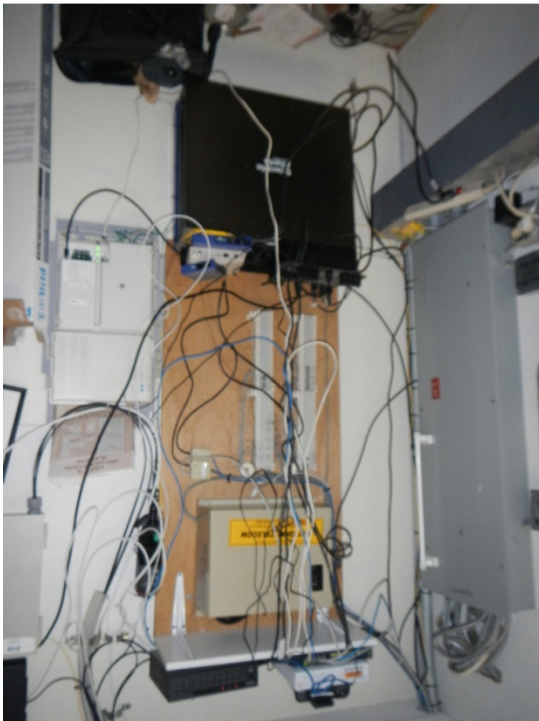


Photo GSC8: Existing Telecommunications

ESTIMATE OF PROBABLE SENIOR CENTER REPAIR AND IMPROVEMENT COSTS

Basis of Estimate: Observed Building and System deficiencies and specifically noted Repairs and Code Improvements
This Estimate does not include probable Renovation costs

A. SITE

- | | | |
|----|--|--------|
| 1. | Replace deteriorating concrete and asphalt curbs | 3,500. |
|----|--|--------|

B. ARCHITECTURAL

- | | | |
|-----|--|------------|
| 1. | Remove and reconstruct Exterior Egress Stair w/canopy | \$ 25,000. |
| 2. | Furnish/install new Elevator, Hoistway and Machine Room | 140,000. |
| 3. | Provide accessibility improvements at Restrooms | 42,000. |
| 4. | Reconstruct and re-slope Lower Level Exterior ramp w/railings | 7,000. |
| 5. | Replace door hardware w/accessible hardware | 6,400. |
| 6. | Provide minimum accessibility features to Kitchen & pass-through | 6,100. |
| 7. | Replace deteriorating carpeting | 3,000. |
| 8. | Replace windows for operability and energy efficiency | 29,000. |
| 9. | General and miscellaneous accessibility improvements | 12,000. |
| 10. | Replace deteriorated gypsum board and wall base at Toilets | 800. |
| 11. | Firestop existing Firewall penetrations | 1,000. |
| 12. | Repair exterior building trim and siding | 2,100. |
| 13. | Repair door thresholds | 1,200. |
| 14. | Provide automatic power-assist Main Entrance Door operator | 3,000. |

C. STRUCTURAL

- | | | |
|----|---|----------|
| 1. | Seismic improvements for Emergency Shelter Function (Allowance) | 120,000. |
|----|---|----------|

D. PLUMBING

- | | | |
|----|--|---------|
| 1. | Remove Temporary Hood over Gas Meter | 500. |
| 2. | Extension of Vent Pipe for Generator | 2,000. |
| 3. | Emergency Shelter Generator Gas Piping Modifications | 10,000. |
| 4. | Redundant Fuel (LP) Tanks | 24,000. |
| 5. | Misc. Plumbing Repairs | 7,500. |

E. FIRE PROTECTION

- | | | |
|----|--|--------|
| 1. | Miscellaneous Fire Protection Upgrades | 5,000. |
|----|--|--------|

F. HVAC

- | | | |
|----|---|---------|
| 1. | Relocation of Exhaust Termination to Roof | 4,000. |
| 2. | Miscellaneous HVAC and Control Repairs | 10,000. |

G. ELECTRICAL

1.	Replace lighting fixtures with exposed lamps	2,000.
2.	Upgrade existing egress lighting for code compliance	3,000.
3.	Upgrade existing Fire Alarm System for code compliance	4,500.
4.	Upgrade exterior lighting	5,000.
5.	Miscellaneous Electrical repairs	5,000.
6.	Utility cost for service upgrade for Elevator	40,000.
7.	Upgrade distribution system to 3-Phase 600A 120/208V	36,200.
SUB-TOTAL		\$ 560,900.

H. CONSTRUCTION FACTORS

1.	General Conditions/ OH & P @ 15% =	<u>84,100.</u>
	Sub-Total:	\$ 645,000.
2.	Study/ Design Contingency@ 10% =	<u>64,500.</u>
	Sub-Total	\$ 709,500.
3.	Escalation to Mid-Pt. Const. (9/17) @ 5% =	<u>35,500.</u>
	Sub-Total	\$ 745,000.
4.	Construction Change Contingency @ 8% =	<u>59,600.</u>

I. TOTAL CONCEPTUAL REPAIR AND IMPROVEMENT BUDGET: \$ 804,600

J. PROJECT DEVELOPMENT EXPENSES:

1.	Architectural / Engineering Services: (DCAM Schedule)	\$ 85,000.
2.	Printing / Reproduction	6,000.
3.	Legal Advertising / Bid	1,000.
4.	Clerk of the Works	40,000.
5.	Construction Materials Testing	6,000.
6.	Temporary Senior Center relocation expenses (Allowance)	<u>20,000.</u>
	Total Project Development Costs	<u>\$ 158,000.</u>

K. TOTAL CONCEPTUAL PROJECT BUDGET SUMMARY: \$ 962,600.

L. QUALIFICATIONS

1. This Summary of Probable Project Cost is based on a non-specific Building and Site Design and the following assumptions:
 - a. Normal Construction schedule has been used to prepare this Summary.
 - b. Premium time costs are not included. Costs are based on forty-hour workweek, Mon. thru Fri.
 - c. This Summary is based on prevailing wage rates.
 - d. No costs are included for disposal or remedial work on contaminated soil.
 - e. An Allowance is not included for hazardous materials.
 - f. Items that could impact this Summary are:
 - 1) Unforeseen subsurface conditions
 - 2) Restrictive technical specification
 - 3) Non-competitive bid conditions (less than five qualified bids)
 - 4) Sole source specification of materials or products
 - 5) Delays beyond the project schedule or **May 2017 bid date**
 - 6) Accelerated completion
 - 7) Unforeseen permitting conditions
2. This opinion of Probable Budget Summary of Project Cost is made on the basis of the experience, qualifications and best judgment of RAI's Professional Staff. This Summary is for Budget purposes only. Actual construction value is determined after the completion of the Construction Documents and the Bid Award process. Variance of +/- 5% of the Summary amount is probable.

GROTON SENIOR CENTER
GROTON, MA

SITE AND BUILDING ANALYSIS



Existing Groton Country Club



Existing Prescott School



Existing Groton Senior Center

A. INTRODUCTION

- EVALUATION METHODOLOGY

B. GROTON COUNTRY CLUB

- SITE/ BUILDING EVALUATION NARRATIVE
- EVALUATION MATRIX

C. PRESCOTT SCHOOL

- SITE/ BUILDING EVALUATION NARRATIVE
- EVALUATION MATRIX

D. EXISTING GROTON SENIOR CENTER

- SITE/ BUILDING EVALUATION NARRATIVE
- EVALUATION MATRIX

E. SUMMARY

- SUMMARY NARRATIVE
- SUMMARY EVALUATION MATRIX
- SUMMARY RECOMMENDATION

EVALUATION METHODOLOGY

METHODOLOGY FOR EVALUATION

The purpose of the site and building evaluation process is to identify selection criteria that can be used to rank various site locations against that criterion, with the expected result that one building and site location will be identified as the most advantageous and preferable project LOCATION.

IDENTIFYING THE SELECTION CRITERIA

The site and building evaluations and matrix that follow include several lines of criteria that have been organized into 6 broad categories including Site location, Land, Zoning/ Regulatory, Environmental, Utilities and Building/ Systems.

RAW SCORE

Reinhardt Associates rated each criterion on a scale of zero (0) to 3, with zero (0) being a poor evaluation rating and 3 being a excellent evaluated rating. The result for any particular line item is shown at the right margin of the matrix as a Raw Score. The Raw Score is further adjusted with a multiplier known as an Importance Factor.

IMPORTANCE FACTOR

Recognizing that not all of the criteria listed and described are of equal value , and that same criteria will be more important than others, an Importance Factor is provided within the matrix. The purpose of the Importance Factor is to appropriately adjust the impact or weight any one criteria has on the overall score of the site and building being considered.

For example, *Renovation Costs for Emergency Shelter* has an Importance Factor of 5, whereas *Historic District Restrictions* has an Importance Factor of 1. From this example, Reinhardt Associates suggests the relative importance of *Renovation Costs for Emergency Shelter* exceeds the relative importance of *Historic District Restrictions* by a factor of 5. The criterion of cost is therefore recognized and accounted for as very important by the Importance Factor. The Raw Score for this criterion is adjusted upwards, and ultimately has a greater impact on the Total Weighted Score of the site and building being considered. Reinhardt Associates and the Study Committee have reviewed the relative importance of all of the evaluation criteria, and agree on the consensus factors within this Report.

SUBJECTIVITY

The relative scoring and importance of any one criterion is initially a professional opinion, and therefore can have some subjectivity. Reinhardt Associates has provided its scoring in an effort stimulate discussion and input from the Town and Study Committee, encourage various points of view, and to achieve an appropriate consensus regarding final scoring. The scoring represented in this Report has been vetted and discussed with the Study Committee. The resultant scoring is the consensus of Study Committee and Reinhardt Associates.

WEIGHTED SCORE

The Weighted Score that appears on the far right hand margin of the matrix represents both the respective quality, and the relative importance of that criterion supporting a new or renovated Groton Senior Center.

TOTAL WEIGHTED ASSESSMENT SCORE

Weighted Scores are added together for the Categories 1 through 6 to arrive at the Total Weighted Assessment Score. Evaluation criteria that scored identically across all (3) sites does not differentiate any site and is deleted from final weighted scoring. The three (3) locations being considered are then evaluated against one another to arrive at the one preferred higher ranked site.

The narrative summaries that will follow focus on the primary qualitative criteria that distinguish one location from the other.

SITE/ BUILDING EVALUATION NARRATIVE

GROTON COUNTRY CLUB

The Groton Country Club building is sited on the Town owned golf course surrounded by well landscaped grounds. The existing parking area provides approximately 100 parking spaces. Parking for visitors and employees is shared between the Country Club building, a large community swimming pool, and a small restaurant. The Country Club Building was built in the 1960s of wood framed construction of approximately 17,600 sq. ft. There is an 8,800 square foot main level with a similar sized concrete basement below. The main level contains business offices, locker rooms, a large open banquet hall with bar, storage areas, and a commercial kitchen. The lower level contains maintenance shops and storage for equipment and materials.

Utilizing the Groton Country Club as the new Groton Senior Center has both advantages and disadvantages. This summary evaluation highlights these factors that make the building a good candidate for Senior Center use, while also identifying any deficiencies or conditions that may make it less appropriate for use as a Senior Center. A detailed line item matrix of all criteria used in the evaluation process follows this summary.

ADVANTAGES OF THE COUNTRY CLUB FOR USE AS SENIOR CENTER

The existing Country Club building contains large open spaces that can be repurposed for individual Senior Center functions. A commercial kitchen currently exists within the floor plan and would be sufficient to satisfy the proposed Senior Center space needs and meal programs. The 13,000 sq. ft. Senior Center space requirement can be fit within the existing overall building area. However, a significant portion of the program area will need to be placed within the confined basement space.

Commercial kitchens are a significant investment in new or renovated Senior Centers. This building contains an existing commercial kitchen with the majority of the necessary kitchen equipment currently installed. Further upgrades would be required including a Type II ventilation hood to the dishwasher, make-up air to the grease hood, and other miscellaneous plumbing work to allow appropriate use of this existing kitchen facilities.

A fire suppression system is not installed in the building but would be required as part of any significant renovation. It appears that the required water service is available within the building to support a new fire suppression system. The existing domestic water system is in good working order and would require only minimal modification for continued use.

The existing Country Club appears to have the capacity to upgrade the current electrical service without requiring a major upgrade by the utility company. The anticipated capacity assumes an estimated electrical service of 600A.

DISADVANTAGES OF USING THE COUNTRY CLUB AS A SENIOR CENTER

Locating the new Groton Senior Center to this location would require the current Country Club occupancy to vacate the building. The existing building does not contain adequate square footage to accommodate both the Country Club and the Senior Center functions. Considerable additional costs would result in providing a new, replacement facility for the ongoing Country Club operations. Such costs would need to be budgeted but could approximate the cost of a new Senior Center or part thereof.

Parking at the existing Groton Country Club is on a first come basis. Program requirements for Senior Center parking, either at a new or renovated facility are estimated to be 70 to 90 spaces. With the current available parking limited to 100 vehicles and insufficient land for expansion, patrons of the restaurant and visitors to the community pool will be competing with Seniors for parking spaces.

Accessibility is a difficult and potentially expensive issue to resolve for this building and existing site. Parking serving the building is fairly remote and the majority of this parking is located more than 150 feet from the building's main entrance. Once near the building, the main entrance is located about 10 feet above the surrounding pavement and can only be reached by climbing a flight of stairs, which is appropriate for Senior Center accessibility. Building an accessible ramp system into the hillside, with a new landing and guardrails at the main entrance would be costly and add approximately 140 feet of ramp length to access the building. There are two existing entrances to locker rooms that are also not accessible. At a far end of the building some accommodation has been made to create an accessible entrance into the large open banquet space. Accessible parking is limited to 3 vehicles and is located approximately 100 feet away from this entrance.

The building does not contain an elevator but one would be required to provide full and reasonable access. Use of the entire basement level is not readily available unless Seniors use an exterior accessible route to travel from the main level, and outside to the basement level. Entrance to the basement level is currently through an opening in the foundation wall used by employees of the golf course grounds maintenance shop. New accessible restrooms would also be required in the basement. The quality of the available square foot area in the basement is poor and lacks natural light.

Seniors would be inconvenienced by the lack of an available area where vehicles can drop off passengers at grade and close to the main entrance of the building.

Structural alterations required for an Emergency Shelter or Essential Facility could be expensive. The existing wood frame construction and the building code would require structural alterations to brace the building against horizontal forces. These types of structural improvements include transforming perimeter walls into structural shear walls; adding plywood panels at all perimeter walls; connecting floor and roof diaphragms to surrounding perimeter walls and installing steel hold-down anchors to acceptable foundations.

The existing HVAC systems serving the building are beyond their useful life expectancy and require replacement. Under replacement the HVAC systems will need to be brought up to current code which will require an increase in mechanical ventilation, optimized controls and improvements in energy efficiency. With the increase in ventilation additional energy consumption will occur and utilizing fuel oil for heating energy cost for this building may be higher than other options (per square foot). To continue with the existing separation of the heating and cooling systems, with separate ductwork distribution, initial construction costs will be higher for this option. Lastly, to utilize the basement as occupied space additional HVAC systems would be required to temper and provide ventilation air. These systems serving the basement would require their own electrical connections and air distribution ductwork. The upper level spaces would need to be opened to both remove existing equipment and install new equipment.

In addition to a new automatic fire sprinkler, the attic space will require a dry pipe fire suppression system. Portions of the remaining attic space would pose difficult conditions to install a fire protection system.

A major electrical disadvantage of reuse the existing Country Club is the condition and material used for the existing branch circuit wiring. The existing branch circuits use Romex cabling. Romex is not allowed under the present code. Any renovation would trigger an electrical code upgrade, and require all branch circuitry to be replaced. Additional added project cost would also occur due to code requirements for fire separation of electrical wiring between normal and emergency power systems. Achieving the required fire separations may be difficult due to the age and construction of the Country Club structure.

SITE and BUILDING EVALUATION: Groton Country ClubTOTAL WEIGHTED ASSESSMENT SCORE: **73**

CRITERIA FOR SITE/ BUILDING EVALUATION:	ASSESSMENT:	Raw Score	Importance Factor	Weighted Score
1. SITE LOCATION:				
A. Accessibility and Proximity to Town Center	Short Distance Away From Town Center	2	x3	6
B. Traffic Access, Public Transportation	On Congested Main Route, Distant Walk From Road	1	x3	3
C. Access to Recreational Amenities	Good, Golf Course With Pool	3	x2	6
2. LAND:				
A. Adequate Bldg and/or Addition Land Area	Limited Expan., Shared w/ Golf Course & Restaurant	1	x4	1
B. Acquisition Expense	Will Need to Replace Club House Facility	3	x5	15
C. Available Parking	Only 100 Spaces and Shared, Parking Flat but Remote	0	x4	0
D. Topography and Site Development Costs	Fair, Not Flat Site, Hillside Adjacent to Building	1	x5	5
3. ZONING/REGULATORY:				
A. Zoning/Restrictions, Compatible Land Uses	Compatible Existing Use	3	x2	6
B. Historical District Restrictions	None	3	x1	3
C. FEMA Flood Zone	N/A	3	x2	6
4. ENVIRONMENTAL:				
A. Proximity to Wetlands, Rare Species, Habitat	Not Near Environmentally Sensitive Areas	3	x2	6
B. Probability of Hazardous Waste/Materials	Minimal, Based on Historical Use	3	x3	9
5. UTILITIES:				
A. Availability to Public Sewer, Water, Gas	Septic System, New Pumps Needed	2	x3	6
B. Availability to Electric, Data, Communications	Services Available	2	x2	4
6. BUILDING/ SYSTEMS:				
A. Condition of Structure	Unrenovated 1960's Wood Frame Building	1	x3	3
B. Program Fits Available Bldg Area	Can Support Program on 2 Levels with Basement	3	x5	15
C. Commercial Kitchen and Large Meeting Space	Yes	3	x3	9
D. Retrofit Costs to Emergency Shelter	Seismic Upgrades Required	1	x4	4
E. Accessibility Issues/ Retrofit Costs	Lacks Many Accessible Components	0	x3	0
F. Elevator Access Available	Does Not exist	0	x3	0
G. Condition of Mech/ Elect Systems	Inadequate, Useful Life of Systems Exceeded	0	x3	0
H. Fire Protection System Availability	Does Not Exist but Service Main Adequate	1	x3	3
I. Generator	New Generator Required	0	x1	0
TOTAL WEIGHTED ASSESSMENT SCORE ^{Note 1}				73

Note: Gray text represents equivalent criteria at all three sites/buildings

Note¹: Total weighted score does not include equivalent (gray) scoring

SITE/ BUILDING EVALUATION NARRATIVE

PRESCOTT SCHOOL

The Prescott School is a historic elementary school building located at 145 Main Street. The site is an irregularly shaped 2.81 acre lot with pavement and parking near Main Street, a lawn and playground area in the center, and wooded and wetland areas along the sides and rear of the property. The property slopes from frontage on Main Street, downward toward a designated wetlands area at the rear of the site. There are 32 existing parking spaces and 2 accessible parking spaces. The building is listed on the Massachusetts Register of Historic places, is 3 stories in height, with brick masonry exterior. All windows have been replaced during a recent exterior renovation project and are in good condition. Some interior spaces have been preserved and refurbished and are in good condition, but many spaces appear in their original state. Recently, the Town reportedly leased a large portion of the building to the Groton-Dunstable Regional School for use as administrative offices.

Utilizing the Existing Prescott School as the new Groton Senior Center has both advantages and disadvantages. This summary evaluation highlights these factors that make the building a good candidate for Senior Center use, while also identifying any deficiencies or conditions that may make it less appropriate for use as a Senior Center. A detailed line item description of all criteria used in the evaluation process follows this summary.

ADVANTAGES OF PRESCOTT SCHOOL FOR USE AS SENIOR CENTER

One significant advantage of the Prescott School is the site and building are owned by the Town, and the location is within the Town's immediate commercial center. Being centrally located, the Prescott School is close to many other civic functions, cultural amenities and local businesses. Seniors may find the close proximity to these attributes desirable. The building has been maintained in good condition, and significant new investments have occurred recently. The interior space contains individual classroom spaces that could be programmed for individual Senior Center functions. The Senior Center program area can fit within the basement and first floor area. The 2-story gymnasium could be used for large gatherings and other multi-functional uses.

A boiler heating system for the building currently exists and could be used. A steam to hot water heat exchanger system is also a viable and efficient option, however space constraints would need to be addressed to accommodate this type of system. A steam to hot water heat exchanger system would provide a significant decrease in initial costs for utilizing the building. The existing small kitchen has not been in service for many years, but portions of the existing kitchen system may be available for reuse. Portions of the newly installed power and telecommunications infrastructure within the building could also be reused as part of a Senior Center renovation project.

DISADVANTAGES OF THE PRESCOTT SCHOOL FOR USE AS SENIOR CENTER

A major disadvantage of the Prescott School is the inflexibility of existing classroom sizes to accommodate various room sizes of the Senior Center program. Planning appropriate accessible improvements for historic buildings can be challenging, and providing accessibility will be a major issue to confront and solve for this building. Older and historic buildings present obstacles for aesthetic and practical placement of accessible ramps, railings and elevators. This building does not contain an elevator but will require an elevator to meet accessibility codes and access each floor. The lower floor level is accessible directly from the parking area, but upper floor levels are not accessible. Door threshold heights and even minor level changes all need to be identified and resolved. The primary front entrance to the building contains steps only. Adding designated accessible parking near the front entrance, along with a small accessible ramp to the main entrance, could address accessibility for a few visitors through this primary building entrance. Additionally, the building lacks a convenient drop off area near the front entrance.

A second significant concern of this site is related to its location on Main Street and the reported heavy prevailing traffic that detracts from the overall accessibility of the site to Seniors.

Sharing this building with another major tenant may also present challenges. While the Groton-Dunstable Regional School, or any other major tenant, may use the building primarily for administrative offices and during normal business hours, there will almost certainly be times where events between the major tenants coincide, and where close coordination and compromise are required of both groups. For example, should the Senior Center require additional program space within the building in future years, such space may simply not be available. And should the other major tenant wish to expand their staff and negotiate for more of the finite parking spaces, this can place undue pressure on the Senior Center when scheduling their own daytime events. An occupied building, if tenant remains, will increase project costs and project schedule.

The 15,000 SF Senior Center program does not fit onto a single floor plate. Thus, program spaces on the lower, main and upper levels are only interconnected via stairs. The quantity of parking spaces is limited, and parking areas are located lower than the first floor level. Ramps or stairs are required to reach the main level from the parking areas. A small kitchen exists at the lower level but has not been used for years. The kitchen is not commercial grade and would require extensive investment to renovate into a modern commercial kitchen. A new grease interceptor would be required for a commercial kitchen.

The existing building is built of unreinforced unit masonry. Should an emergency shelter be incorporated, building code will require structural alterations to internally brace the building against seismic forces. These types of structural improvements to older masonry buildings could be expensive, and would add additional cost to the project.

The existing water service is not currently sized for a fire suppression system. Therefore, the incoming 2-inch water service is not adequate. A new water main would be required for the renovation, and a new fire protection sprinkler system would be required for the entire building including Non-Senior Center areas thereby increasing the overall cost of a fire protection/ sprinkler system. It is reported that an additional building improvement will provide fire protection sprinklers for the Second floor School Administration space.

The existing low sloped roof does not contain any mechanical equipment. Renovations will require several pieces of equipment to provide heating, cooling and ventilation that may be mounted on the roof. New HVAC equipment can weigh thousands of pounds and additional structural reinforcement may be necessary. Considering the age of the building, the roof structure will need to be assessed for structural strength by a registered professional engineer.

Concealing new HVAC ductwork in this historic building may be difficult. The existing ceilings are high to the structure above, and without space between floors that could otherwise conceal mechanical equipment, ductwork, piping and controls. Exposed mechanical items may provide a less historical appearance, and may not be appropriate for this building. Additionally, should new suspended ceilings be installed, the overall historical aesthetic may be diminished.

An electrical service upgrade from the local utility company is required to accommodate a significant major renovation of the building. A major renovation will trigger new code requirements, and the present electric service panel may be inadequate to accommodate the new systems. The electrical service size will need to be increased since power needs to accommodate both the proposed Senior Center, and the additional spaces not utilized by the Senior Center. Finally, concealment of infrastructure cabling may be difficult since the original high ceilings may be left exposed.

All of the above disadvantages can translate into somewhat higher renovation costs for this building.

SITE and BUILDING EVALUATION: Prescott SchoolTOTAL WEIGHTED ASSESSMENT SCORE: **87**

CRITERIA FOR SITE/ BUILDING EVALUATION:	ASSESSMENT:	Raw Score	Importance Factor	Weighted Score
1. SITE LOCATION:				
A. Accessibility and Proximity to Town Center	Very Good, Located Within Town Center	3	x3	9
B. Traffic Access, Public Transportation	On Congested Main Route with Public Transportation	2	x3	6
C. Access to Recreational Amenities	Very Good, Local Businesses and Cultural Amenities	3	x2	6
2. LAND:				
A. Adequate Bldg and/or Addition Land Area	Fair, Expansion Restricted by Parking Area	2	x4	8
B. Acquisition Expense	None	3	x5	15
C. Available Parking	Does Not Meet Program Reqs. for Parking, Only 34	0	x4	0
D. Topography and Site Development Costs	Good, Compact Site	2	x5	10
3. ZONING/REGULATORY:				
A. Zoning/Restrictions, Compatible Land Uses	Compatible Existing Use	3	x2	6
B. Historical District Restrictions	Restrictions Apply, MA Historic Building	2	x1	2
C. FEMA Flood Zone	N/A	3	x2	6
4. ENVIRONMENTAL:				
A. Proximity to Wetlands, Rare Species, Habitat	Wetlands Nearby	2	x2	4
B. Probability of Hazardous Waste/Materials	Poor, Lead Paint, Vinyl Asbestos Tile on Flooring	1	x3	3
5. UTILITIES:				
A. Availability to Public Sewer, Water, Gas	Site Allows Access to Town's Utilities	3	x3	9
B. Availability to Electric, Data, Communications	Services Available Nearby	2	x2	4
6. BUILDING/ SYSTEMS:				
A. Condition of Structure	Good, Renovated Historic Building	2	x3	6
B. Program Fits Available Bldg Area	Program Fits on 2 Levels	3	x5	15
C. Commercial Kitchen and Large Meeting Space	Old Abandoned Kitchen in Basement	2	x3	6
D. Retrofit Costs to Emergency Shelter	More Extensive Seismic Upgrades Required	0	x4	0
E. Accessibility Issues/ Retrofit Costs	Accessibility Requirements Triggered for Entire Bldg.	1	x3	3
F. Elevator Access Available	Does Not Exist, Could Be Added to Exterior	0	x3	0
G. Condition of Mech/ Elect Systems	Required Ductwork, Water Service, Elec. Service	1	x3	3
H. Fire Protection System Availability	Partial/ In Progress	1	x3	3
I. Generator	Does Not Exist, New Generator Required	0	x1	0
TOTAL WEIGHTED ASSESSMENT SCORE ^{Note 1}				87

Note: Gray text represents equivalent criteria at all three sites/buildings

Note¹: Total weighted score does not include equivalent (gray scoring)

SITE/ BUILDING EVALUATION NARRATIVE

EXISTING GROTON SENIOR CENTER

The existing Groton Senior Center is located near Route 225 on a remote 6 acre site approximately 2 miles from the Town center. The site is heavily wooded and consists of the Senior Center building, paved parking areas, and community gardens. The parking area includes spaces for 70 vehicles. The building has 2 stories, and an on-grade basement and above grade First floor, and was originally constructed as a VFW Post. The building contains a large open meeting room, private offices, and smaller program spaces. Visitors enter the building by either an exterior wood stair or an exterior wood ramp system.

Expanding the existing Groton Senior Center has both advantages and disadvantages. This summary evaluation highlights these factors that make the building a good candidate for expansion, while also identifying deficiencies that make it less appealing for continued use as the new Groton Senior Center. A detailed line item description of all criteria used in the evaluation process follows this summary.

ADVANTAGES OF EXPANDING THE EXISTING GROTON SENIOR CENTER

A significant advantage this site and building has over other choices is the available land to develop, and the ability to avoid considerable project expense by phasing both the renovation and new construction activities. Additionally, the property is already owned by the Town.

The existing location offers positive attributes. Already in use as a Senior center, this building includes program spaces and functions that can be repurposed for the same user group. The site is secluded and private, and provides parking areas for seniors and visitors in level paved areas relatively near the building. Seniors report that travelling to the present site is convenient for residents located throughout the town. The site is heavily wooded and includes walking paths, individual plots for gardening, a secret wetland, and other recreational opportunities.

The building currently utilizes a fire protection system. A 6-inch water service exists and considering the flow rate, a new fire protection system for the addition may be achievable from this service. The existing domestic water heater is in serviceable condition and would need only minimal repair/improvements to continue serving the building.

The existing branch circuit wiring can be used for any new renovations. The existing lighting circuitry can be used along with a new lighting control system, and with minimal re-configuration required.

DISADVANTAGES OF EXPANPANDING THE EXISTING GROTON SENIOR CENTER

The renovation of the existing Groton Senior Center would also present some challenges to resolve. The building is too small to accommodate the Senior Center program and would need to be expanded to meet the projected programmatic space needs. During any proposed renovations, the current functions and programs would be required to be temporarily relocated to another facility at some possible cost to be determined. An addition to the Senior Center could be built separately, and then occupied while the existing Senior Center is being renovated. However, these temporary moves increase the cost of the overall renovation project. Alternatively, the Senior Center could relocate programming to other locations if possible and available.

Building a new addition beside the existing Senior Center creates design challenges to overcome. The upper floor levels for both the existing Senior Center and any new addition will most likely not align horizontally. Specifically, the lower level of the Senior Center contains a rear exit to grade, while the majority of the land and site surrounding the building is slightly higher. This results in the existing main level being located approximately 6 feet above the ground level of the site. For a new addition with the entrance located at grade, the existing first will create a three-level/ split level floor plan. Thus, the desired horizontal connection allowing visitors to pass freely from one building to the other does not occur because the floor levels do not match. Solutions will require stairs, internal ramps, and additional elevator stops to accommodate the actual elevation changes.

Alternatively, if the upper floor level of the new addition matched horizontally with the upper floor level of the existing senior center, the new addition would have a recessed ground floor level. Again, ramps or stairs providing access to a recessed first floor level would be required at the new addition.

As a designated Town Emergency Shelter, a renovation of this “Essential Facility” will require structural and seismic improvements to the building that could be extensive, and can increase project expense.

Current HVAC systems do not have mechanical means of providing adequate outdoor and ventilation air. The renovation will therefore require additional attic penetrations, attic mounted equipment, and controls.

The primary electrical disadvantage of the existing Senior Center is the existing electrical service is single phase. Renovations would require 3-phase 15 KV voltage lines to be installed from the main road. Upgrades to both electrical service and back-up/ emergency power will increase to accommodate the power requirement of an addition.

SITE and BUILDING EVALUATION: Existing Groton Senior CenterTOTAL WEIGHTED ASSESSMENT SCORE: **104**

CRITERIA FOR SITE/ BUILDING EVALUATION:	ASSESSMENT:	Raw Score	Importance Factor	Weighted Score
1. SITE LOCATION:				
A. Accessibility and Proximity to Town Center	Remote Location Away From Town Center	1	x3	3
B. Traffic Access, Public Transportation	Low Traffic, Van Access Only	3	x3	9
C. Access to Recreational Amenities	Very Good, Heavily Wooded, Walking Trails, Gardens	3	x2	6
2. LAND:				
A. Adequate Bldg and/or Addition Land Area	Adjacent Land Area for Bldg. or Addition	3	x4	12
B. Acquisition Expense	Assumes Addition Land Available at No Costs	3	x5	15
C. Available Parking	Level Parking Adjacent to Bldg.	3	x4	12
D. Topography and Site Development Costs	Reasonable Level Site, Adequate Staging Areas	3	x5	15
3. ZONING/REGULATORY:				
A. Zoning/Restrictions, Compatible Land Uses	Compatible Existing Use with Neighboring Uses	3	x2	6
B. Historical District Restrictions	None	3	x1	3
C. FEMA Flood Zone	N/A	3	x2	6
4. ENVIRONMENTAL:				
A. Proximity to Wetlands, Rare Species, Habitat	Near Possible Environmentally Sensitive Areas	2	x2	4
B. Probability of Hazardous Waste/Materials	Minimal, Based on Historical Use	3	x3	9
5. UTILITIES:				
A. Availability to Public Sewer, Water, Gas	Septic System	2	x3	6
B. Availability to Electric, Data, Communications	Services Available	2	x2	4
6. BUILDING/ SYSTEMS:				
A. Condition of Structure	Fair, Some Deferred Maintenance	2	x3	6
B. Program Fits Available Bldg Area	Poor, Existing Bldg Cannot Accomodate Program	1	x5	5
C. Commercial Kitchen and Large Meeting Space	Small Kitchen and Meeting Room	1	x3	3
D. Retrofit Costs to Emergency Shelter	Seismic Upgrades Required	2	x4	8
E. Accessibility Issues/ Retrofit Costs	Non-Compliant Ramps and Partial Restrooms	1	x3	3
F. Elevator Access Available	Does Not exist	0	x3	0
G. Condition of Mech/ Elect Systems	Inadequate, Elect. Service, Wiring, Ventilation	1	x3	3
H. Fire Protection System Availability	Does Not Exist	1	x3	3
I. Generator	New Generator Required	0	x1	0
TOTAL WEIGHTED ASSESSMENT SCORE ^{Note 1}				104

Note: Gray text represents equivalent criteria at all three sites/buildings

Note¹: Total weighted score does not include equivalent (gray) scoring

SUMMARY NARRATIVE

Based on comparative ranking the Town of Groton and the Study Committee would be well served by further developing the higher ranked existing Senior Center building and site into the new Groton Senior Center. This site and existing building offer many attributes that are both desirable for Seniors, and economical for the Town.

The site is reasonably sloped and does not contain topography that may present barriers to elderly visitors. With level changes and various obstacles to accessibility removed, navigating the property on foot can be a more pleasant experience. Additionally, the site is heavily wooded and contains nature trails and other recreational amenities.

The site offers adequate developable land for either an addition to the existing Senior Center Facility or for a new Senior Center Facility constructed on available land and keeping most Center programming on-site. Parking areas can be expanded to suit the needs of the design program. An incoming 6-inch water service exists, and will be used by the required fire sprinkler system. A site can also easily accommodate construction vehicle and equipment, and project savings can be reflected in favorable bid prices for the renovation and new construction work. As a result, site development costs should be reasonable.

The site offers the possibility of phasing new construction improvements alongside the required renovations. At moderate cost, the existing Senior Center building can be refurbished and repurposed, and continue providing functional space for many different programs. The new construction and renovation can each occur according to a planned and phased construction schedule. Coordinating the improvements has the benefit of creating a unified master plan for the property, while simultaneously providing savings to the project budget.

For these reasons, Reinhardt Associates recommends the development of the existing Groton Senior Center site. Please refer to the following Summary Evaluation Matrix to view scoring comparisons for each site and building.

SITE and BUILDING EVALUATION: Summary Evaluation Matrix

CRITERIA FOR SITE and BUILDING SELECTION:		Importance/ Multiplication Factor	Groton Country Club		Prescott School		Existing Senior Center	
			Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score
1. SITE LOCATION:								
A. Accessibility and Proximity to Town Center		x3	2	6	3	9	1	3
B. Traffic Access, Public Transportation		x3	1	3	2	6	3	9
C. Access to Recreational Amenities		x2	3	6	3	6	3	6
2. LAND:								
A. Adequate Bldg and/or Addition Land Area		x4	1	1	2	8	3	12
B. Acquisition Expense		x5	3	15	3	15	3	15
C. Available Parking		x4	0	0	0	0	3	12
D. Topography and Site Development Costs		x5	1	5	2	10	3	15
3. ZONING/REGULATORY:								
A. Zoning/Restrictions, Compatible Land Uses		x2	3	6	3	6	3	6
B. Historical District Restrictions		x1	3	3	2	2	3	3
C. FEMA Flood Zone		x2	3	6	3	6	3	6
4. ENVIRONMENTAL:								
A. Proximity to Wetlands, Rare Species, Habitat		x2	3	6	2	4	2	4
B. Probability of Hazardous Waste/Materials		x3	3	9	1	3	3	9
5. UTILITIES:								
A. Availability to Public Sewer, Water, Gas		x3	2	6	3	9	2	6
B. Availability to Electric, Data, Communications		x2	4	4	2	4	2	4
6. BUILDING/ SYSTEMS:								
A. Overall Condition of Structure		x3	1	3	2	6	2	6
B. Program Fits Available Bldg Area		x5	3	15	3	15	1	5
C. Commercial Kitchen and Large Meeting Space		x3	3	9	2	6	1	3
D. Retrofit Costs to Emergency Shelter		x4	1	4	0	0	2	8
E. Accessibility Issues/ Retrofit Costs		x3	0	0	1	3	1	3
F. Elevator Access Available		x3	0	0	0	0	0	0
G. Overall Condition of Mech/ Elect Systems		x3	0	0	1	3	1	3
H. Fire Protection Systems Availability		x3	1	3	1	3	1	3
I. Generator		x1	0	0	0	0	0	0
TOTAL WEIGHTED EVALUATION SCORE			73		87		104	

Note: Gray text represents equivalent criteria at all three sites/buildings

Note1: Total weighted score does not include equivalent (gray) scoring

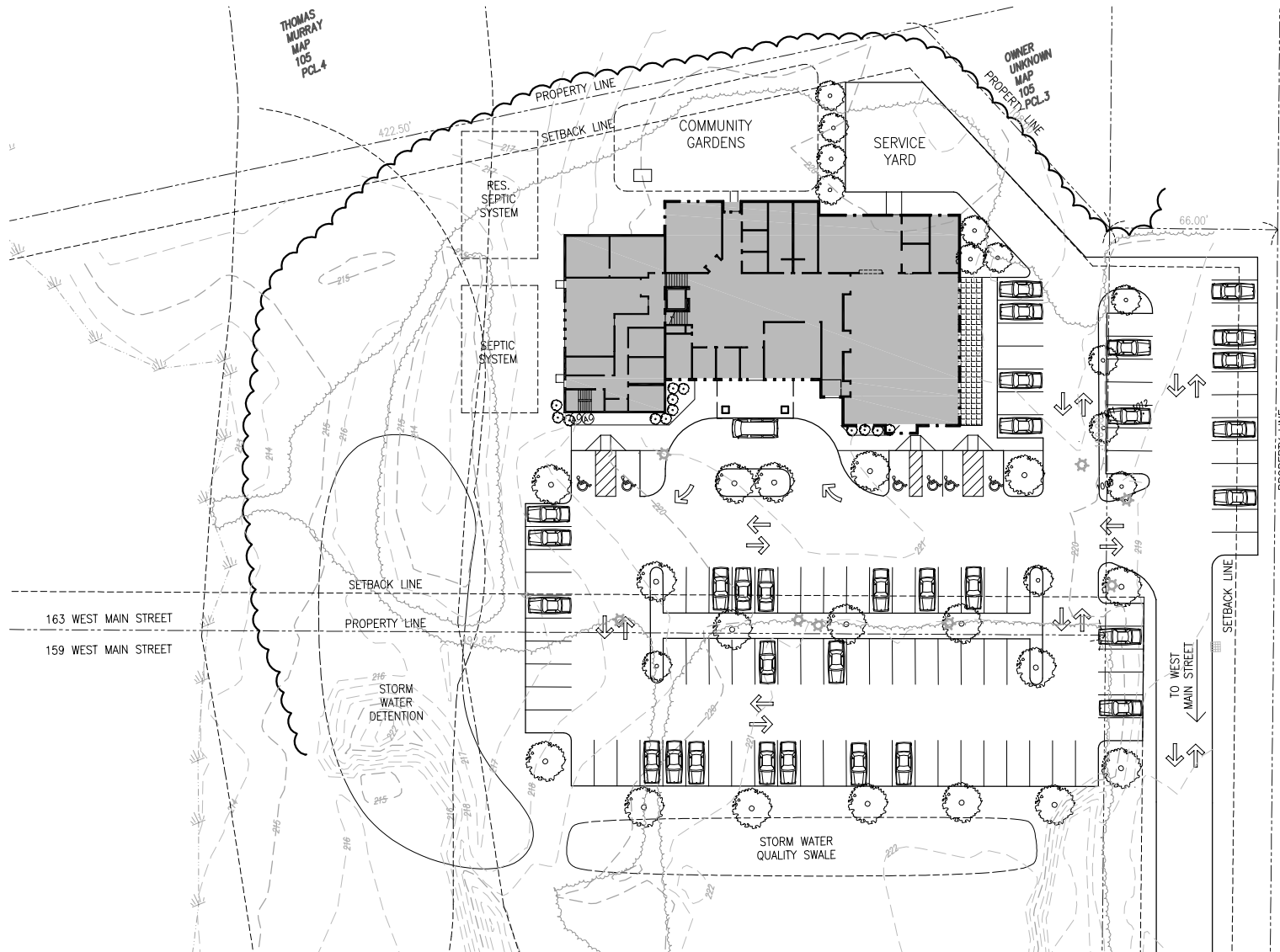
PRELIMINARY DESIGN OPTIONS

A. RENOVATION AND ADDITION TO EXISTING SENIOR CENTER

1. PRELIMINARY SITE PLAN
2. PRELIMINARY LOWER LEVEL PLAN
3. PRELIMINARY UPPER LEVEL PLAN
4. PRELIMINARY BUILDING ELEVATIONS

B. NEW SENIOR CENTER CONSTRUCTION

1. PRELIMINARY SITE PLAN
2. PRELIMINARY FLOOR PLAN
3. PRELIMINARY BUILDING ELEVATIONS



LAND USE DATA

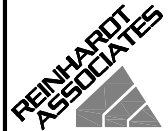
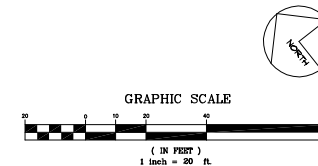
ZONING: RA - RESIDENTIAL-AGRICULTURAL
159-163 WEST MAIN STREET

CRITERIA	REQUIRED	PROVIDED
MIN. LOT AREA	80,000 S. F.	527,512 +S. F.
MIN. FRONT YARD	50'	+/- 600'
MIN. SIDE YARD	15'	48' + 78'
MIN. REAR YARD	15'	>300'

PARKING: RESTAURANT, SIT DOWN
MIN: 5 + 1/3 SEATS
MAX: 5 + 1/2 SEATS

SEATING CAPACITY = 150
MIN: 55 REQUIRED
MAX: 80 REQUIRED

PARKING PROVIDED: 98 TYPICAL SPACES
4 VAN ACCESSIBLE H'CAP SPACES
2 TYPICAL H'CAP SPACES
104 TOTAL SPACES



ARCHITECTS
ENGINEERS
PLANNERS
PROJECT MANAGEMENT

430 MAIN STREET
ASHAMUA, MA 01001
TEL. 413. 788. 2900
FAX. 413. 788. 8956

STAMP:

SCALE: 1"=20'
PROJ. NO: 16-2334
DRAWN: RN
CHECKED: JMAC
DATE: 10-03-2016
FILE NAME: G2334/
REV:
REV:

PROJECT TITLE:

**GROTON
SENIOR
CENTER
FEASIBILITY
STUDY**

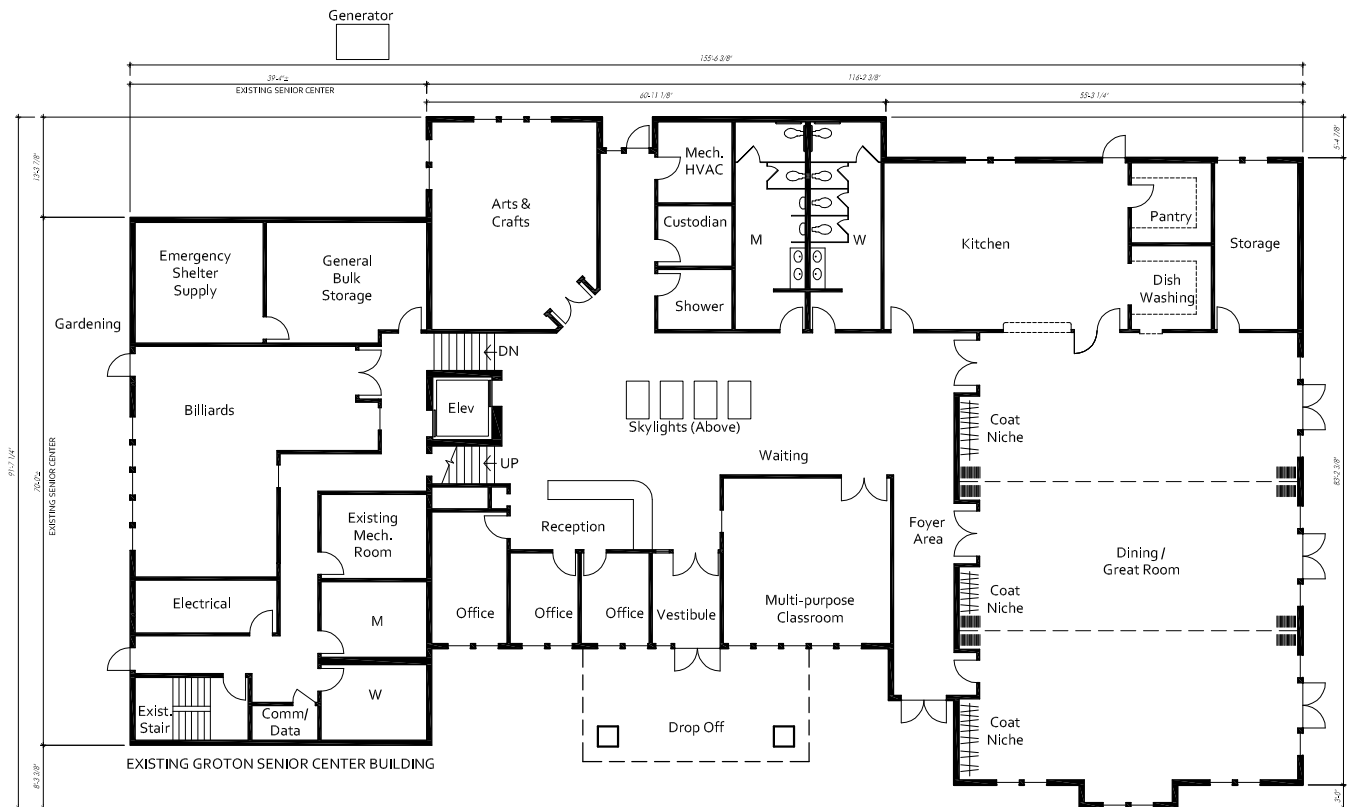
GROTON, MA

DRAWING:
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RENOVATION/
ADDITION**

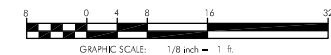
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SITE
PLAN**

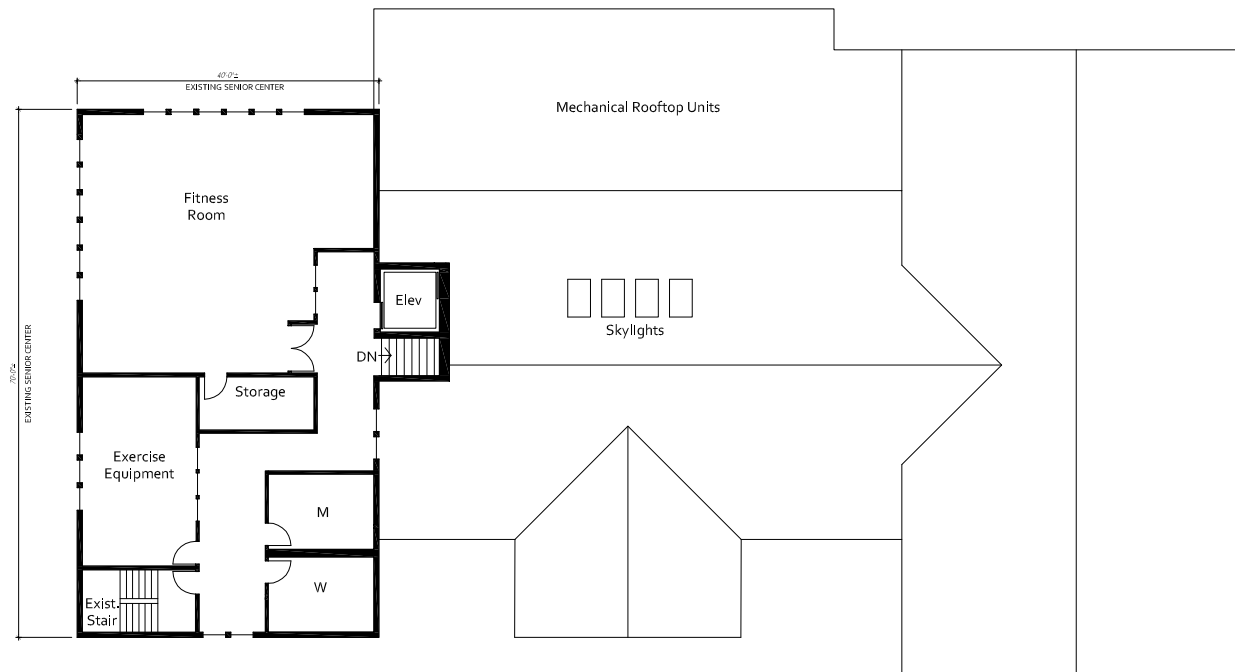
SHEET:

Ap.1



1 LOWER LEVEL PLAN
SCALE: 1/8" = 1'-0"





2 UPPER LEVEL PLAN
SCALE: 1/8" = 1'-0"



- ARCHITECTS
- ENGINEERS
- PLANNERS
- PROJECT MANAGEMENT

430 MAIN STREET
ASAHAMA, MA 01001
TEL. • 413. 785. 2800
FAX • 413. 785. 8855

STAMP:

SCALE: 1/8" = 1'-0"
PROJ. NO: 16-2334
DRAWN: REN
CHECKED: JM
DATE: 10-03-2016
FILE NAME:
REV:
REV:

PROJECT TITLE:

**GROTON
SENIOR
CENTER
FEASIBILITY
STUDY**

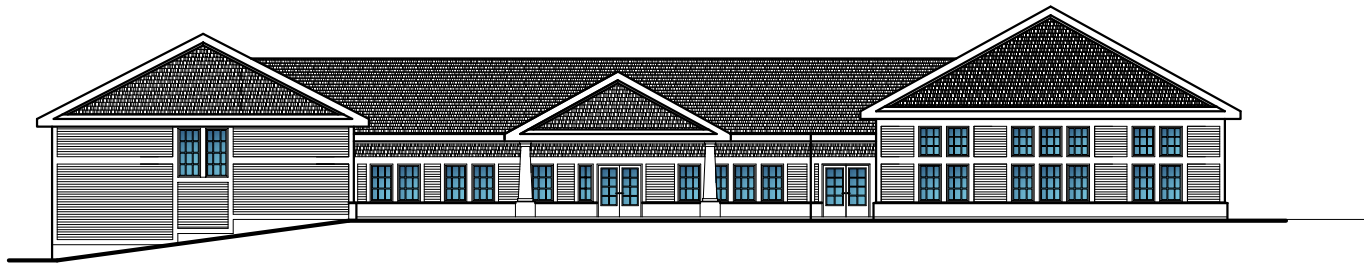
GROTON, MA

DRAWING:
**SENIOR CENTER
RENOVATIONS/
ADDITION**

**PRELIMINARY
UPPER LEVEL
PLAN**

SHEET:

Ap.3



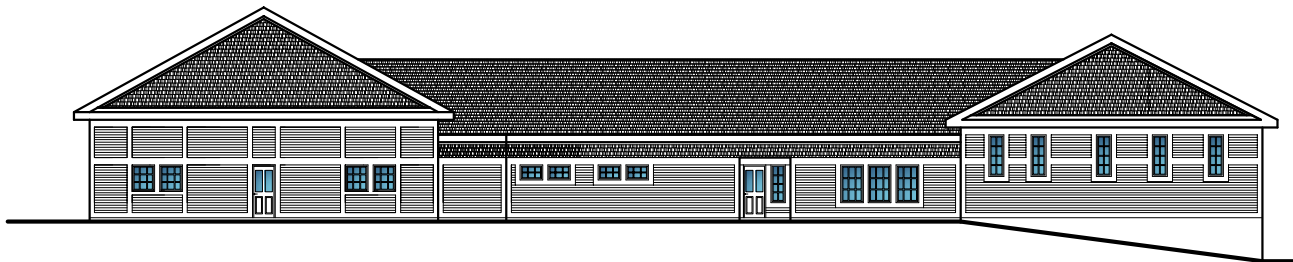
1 SOUTH ELEVATION
1/8" = 1'-0"



2 WEST ELEVATION
1/8" = 1'-0"

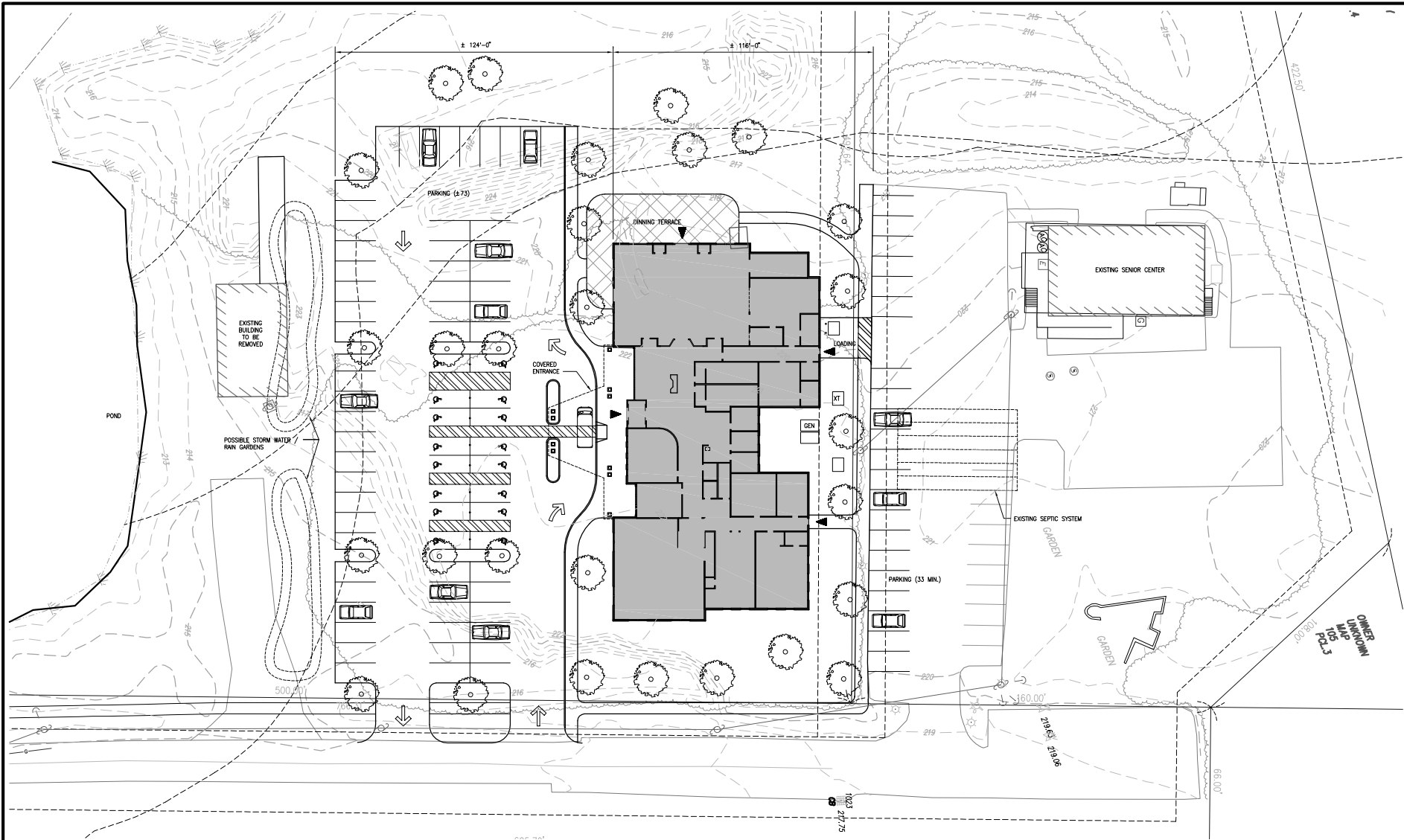


3 EAST ELEVATION
1/8" = 1'-0"



4 NORTH ELEVATION
1/8" = 1'-0"





LAND USE DATA

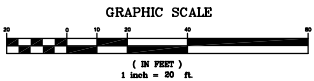
ZONING: RA - RESIDENTIAL-AGRICULTURAL
159-163 WEST MAIN STREET

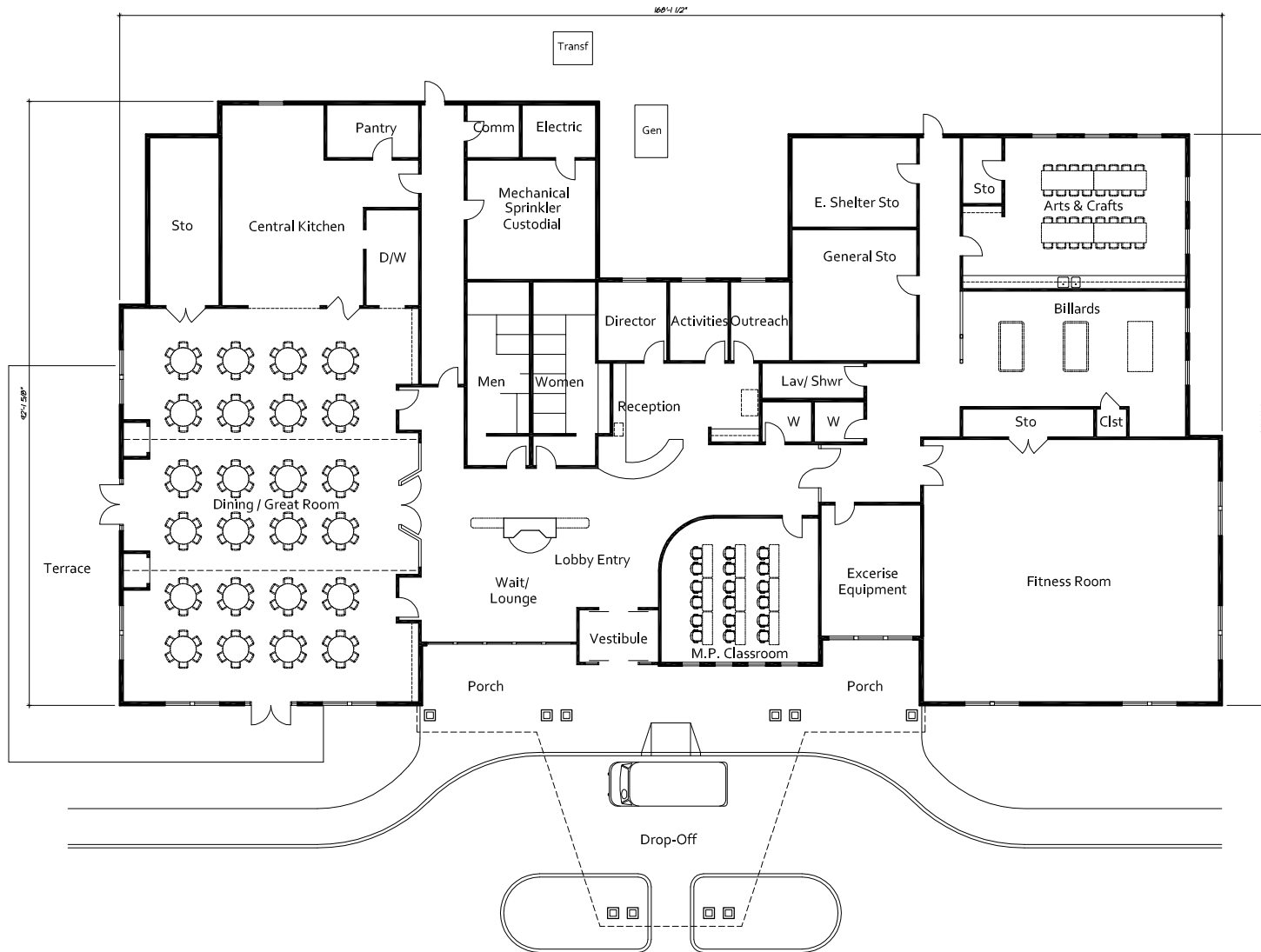
CRITERIA	REQUIRED	PROVIDED
MIN. LOT AREA	80,000 S. F.	527,512 S. F.
MIN. FRONT YARD	50'	+/- 600'
MIN. SIDE YARD	15'	100'
MIN. REAR YARD	15'	>300'
		20

PARKING: RESTAURANT, SIT DOWN
MIN: 5 + 1/3 SEATS
MAX: 5 + 1/2 SEATS

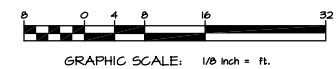
SEATING CAPACITY = 150
MIN: 55 REQUIRED
MAX: 80 REQUIRED

PARKING PROVIDED: 95 TYPICAL SPACES
2 VAN ACCESSIBLE H'CAP SPACES
10 TYPICAL H'CAP SPACES
107 TOTAL SPACES





PRELIMINARY FLOOR PLAN
1/8" = 1'-0"





1 EAST ELEVATION
SCALE: 1/8" = 1'-0"



2 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



3 WEST ELEVATION
SCALE: 1/8" = 1'-0"



4 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



PROJECT BUDGET STATEMENTS

A. CONCEPT BUDGET STATEMENT OF PROJECT COSTS:

1. REPAIRS/ RENOVATION AND ADDITION TO EXISTING SENIOR CENTER
2. NEW SENIOR CENTER CONSTRUCTION

GROTON, MA

CONCEPT BUDGET STATEMENT OF PROJECT COSTS: REPAIRS/ RENOVATION AND ADDITION TO EXISTING SENIOR CENTER

Basis of Design: Repair/ Renovation and Addition to existing Senior Center Building of total 14,388 S.F.
 Site Location: Existing Senior Center and adjacent land

1. SITE WORK

- | | | |
|----|--|-------------|
| a. | General Site Work/ Site Development; Approx. 2 ac. (Allowance) | \$ 440,000. |
| b. | Abatement of hazardous materials | TBD. |

2. GENERAL CONSTRUCTION

- | | | |
|----|---|-------------|
| a. | Existing Building repairs (Previous Est.) | \$ 560,900. |
| b. | Renovate existing 5,600 GSF Building @ \$75/SF= | 420,000. |
| c. | Construct 8,788 GSF Building @ \$263/SF.= | 2,311,200. |
| d. | Covered Entrance Portico/ Drop Off | 80,000. |

Sub Total:	\$ 3,812,100.
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3. CONSTRUCTION FACTORS

- | | | |
|----|--|----------|
| a. | General Conditions and Requirements @ 8% = | 305,000. |
| b. | Contractor Overhead & Profit @ 7% = | 288,200. |
| c. | Bonds and Insurance @ 2% = | 88,100. |
| d. | Study/ Design Contingency@ 10% = | 449,300. |
| e. | Escalation to Mid-Pt. Const. (9/17) @ 5% = | 247,100. |

Sub-Total and Estimated Construction Bid:	\$ 5,189,800.
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- | | | |
|----|--|----------|
| f. | Construction Change Contingency @ 7% = | 363,300. |
|----|--|----------|

4. TOTAL PRELIMINARY CONSTRUCTION BUDGET: \$ 5,553,100.**5. PROJECT DEVELOPMENT**

- | | | |
|----|--|-----------|
| a. | Architectural / Engineering Services: (DCAMM Schedule) | 471,000. |
| b. | Owner's Project Manager (MGL c149§ 44A1/2) | 200,000. |
| c. | Site Survey | Complete. |
| d. | Geotechnical Engineer / Borings / Perc Testing | 10,000. |
| e. | Legal / Bonding Counsel | TBD. |
| f. | Bidding/ Printing | 10,000. |
| g. | Legal Advertising / Bid | 1,000. |
| h. | Clerk of the Works | OPM. |
| i. | Construction Materials Testing | 24,000. |
| j. | Utility Expenses | 23,000. |
| k. | Furniture, Fixtures & Equipment (Allowance) | 200,000. |
| l. | Tel / Data Systems (Est.) | 60,000. |
| m. | Temporary Moving/ Relocation Expenses (Allowance) | 100,000. |

Sub Total:	\$ 1,099,000.
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- | | | |
|----|---------------------------------------|---------|
| n. | Project Development Contingency @ 5%: | 55,000. |
|----|---------------------------------------|---------|

Total Project Development:	\$ 1,154,000.
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6. SITE / PROPERTY ACQUISITION

GROTON, MA

a. Estimated property acquisition costs \$ TBD.

7. TOTAL PRELIMINARY PROJECT BUDGET STATEMENT: \$ 6,707,100.

8. ALTERNATE BID COSTS

a. TBD.

9. QUALIFICATIONS

a. This Summary of Probable Project Cost is based on a preliminary Building and Site Design Drawings dated August 2016, and the following assumptions:

1. Normal Construction schedule has been used to prepare this Summary.
2. Premium time costs are not included. Costs are based on forty-hour workweek, Mon. thru Fri.
3. This Summary is based on prevailing wage rates.
4. No costs are included for disposal or remedial work on contaminated soil.
5. An Allowance is not included for hazardous materials.
6. Items that could impact this Summary are:
 - a. Unforeseen subsurface conditions
 - b. Restrictive technical specification
 - c. Non-competitive bid conditions (less than five qualified bids)
 - d. Sole source specification of materials or products
 - e. Delays beyond the project schedule or **May 2017 bid date**
 - f. Accelerated completion
 - g. Unforeseen permitting conditions

b. This opinion of Probable Budget Summary of Project Cost is made on the basis of the experience, qualifications and best judgment of RAI's Professional Staff. This Summary is for Budget purposes only. Actual construction value is determined after the completion of the Construction Documents and the Bid Award process. Variance of +/- 5% of the Summary amount is probable.

GROTON, MA

CONCEPT BUDGET STATEMENT OF PROJECT COSTS: NEW SENIOR CENTER CONSTRUCTION

Basis of Design: One Story 13,368 S.F. Wood Frame and Sided Building designed.
 Site Location: Existing Senior Center and adjacent land

1. SITE WORK

- | | | |
|----|--|-------------|
| a. | General Site Work/ Site Development; Approx. 2 ac. (Allowance) | \$ 680,000. |
| b. | Demolition of Existing Senior Center (if required) | TBD. |

2. GENERAL CONSTRUCTION

- | | | |
|----|--|--------------|
| a. | Construct 13,368 GSF Building @ \$248/SF.= | \$3,315,300. |
| b. | Covered Entrance Portico/ Drop Off | 80,000. |

Sub Total:	\$ 4,075,300.
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3. CONSTRUCTION FACTORS

- | | | |
|----|--|----------|
| a. | General Conditions and Requirements @ 8% = | 326,000. |
| b. | Contractor Overhead & Profit @ 7% = | 308,100. |
| c. | Bonds and Insurance @ 2% = | 94,200. |
| d. | Study/ Design Contingency@ 10% = | 480,400. |
| e. | Escalation to Mid-Pt. Const. (9/17) @ 5% = | 264,200. |

Sub-Total and Estimated Construction Bid:	\$ 5,548,200.
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- | | | |
|----|--|----------|
| f. | Construction Change Contingency @ 6% = | 332,900. |
|----|--|----------|

4. TOTAL PRELIMINARY CONSTRUCTION BUDGET:	\$ 5,881,100.
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5. PROJECT DEVELOPMENT

- | | | |
|----|--|-----------|
| a. | Architectural / Engineering Services: (DCAMM Schedule) | 470,000. |
| b. | Owner's Project Manager (MGL c149§ 44A1/2) | 200,000. |
| c. | Site Survey | Complete. |
| d. | Geotechnical Engineer / Borings / Perc Testing | 12,000. |
| e. | Legal / Bonding Counsel | TBD. |
| f. | Bidding/ Printing | 10,000. |
| g. | Legal Advertising / Bid | 1,000. |
| h. | Clerk of the Works | OPM. |
| i. | Construction Materials Testing | 26,000. |
| j. | Utility Expenses | 23,000. |
| k. | Furniture, Fixtures & Equipment (Allowance) | 200,000. |
| l. | Tel / Data Systems (Est.) | 60,000. |
| m. | Moving/ Relocation Expenses | 10,000. |

Sub Total:	\$ 1,012,000.
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- | | | |
|----|---------------------------------------|---------|
| n. | Project Development Contingency @ 5%: | 50,000. |
|----|---------------------------------------|---------|

Total Project Development:	\$ 1,062,000.
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GROTON, MA

6. SITE / PROPERTY AQUISITION

a. Estimated property acquisition costs \$ TBD.

7. TOTAL PRELIMINARY PROJECT BUDGET STATEMENT: \$ 6,943,100.

8. ALTERNATE BID COSTS

a. Demolition and site restoration of existing Senior Center. \$120,000

9. QUALIFICATIONS

a. This Summary of Probable Project Cost is based on a preliminary Building and Site Design Drawings dated August 2016, and the following assumptions:

1. Normal Construction schedule has been used to prepare this Summary.
2. Premium time costs are not included. Costs are based on forty-hour workweek, Mon. thru Fri.
3. This Summary is based on prevailing wage rates.
4. No costs are included for disposal or remedial work on contaminated soil.
5. An Allowance is not included for hazardous materials.
6. Items that could impact this Summary are:
 - a. Unforeseen subsurface conditions
 - b. Restrictive technical specification
 - c. Non-competitive bid conditions (less than five qualified bids)
 - d. Sole source specification of materials or products
 - e. Delays beyond the project schedule or **May 2017 bid date**
 - f. Accelerated completion
 - g. Unforeseen permitting conditions

b. This opinion of Probable Budget Summary of Project Cost is made on the basis of the experience, qualifications and best judgment of RAI's Professional Staff. This Summary is for Budget purposes only. Actual construction value is determined after the completion of the Construction Documents and the Bid Award process. Variance of +/- 5% of the Summary amount is probable.

PROJECT SCHEDULE

A. Prospective Project Schedule

PROSPECTIVE PROJECT SCHEDULE

1.	Project Funding Approved	To be determined
2.	Building Committee Formed	To be determined
3.	Site Acquisition	To be determined
4.	Advertise RFQ for Owner's Project Manager (OPM)	To be determined
	a. Optimal Schedule: May to June	
5.	Interview/ Select and Contract with OPM	4-5 Weeks
6.	Advertise RFQ for Architect/ Engineer	1-2 Weeks
7.	Interview/ Select and Contract with A/E	4-5 Weeks
8.	Solicit/ Contract and Obtain Survey and Borings	6-8 Weeks
9.	Design/ Permitting and Construction/ Bid Documents Complete	8-10 Weeks (After Survey/ Borings)
	a. Optimal Schedule: December to February	
10.	Filed Sub-Bids Received	2-4 Weeks
11.	General Bids Received	1-2 Weeks
12.	Contracting and Notice-to-Proceed with Low Bidder	3-4 Weeks (Seasonal Conditions TBD)
	a. Optimal Schedule: February to March	
13.	General Site and Building Construction	12-14 Months (Seasonal Conditions TBD)
14.	Furniture/ Fixture and Equipment Installation	3-4 Weeks
15.	Move-In/ Occupancy	Approximately 1.5-2 years after OPM Ad

SUMMARY RECOMMENDATION

A. Summary Recommendation

SUMMARY RECOMMENDATION

In addition to considering the feasibility and ranking of a renovation and addition to the existing Senior Center this Study, at the request of the Study Committee, also reviewed the comparative features and possible benefits of a newly constructed Senior Center on the same site. As the site location and features scored relatively high and the most significant detractors were associated with the existing Senior Center building and floor elevations the Study Committee wanted to consider all possible program solutions on this site. Therefore, in addition to the preparation of Preliminary Designs for the highly ranked renovation and addition to the existing Senior Center, a Preliminary Design was prepared for an optional new Senior Center construction within the same site area.

These two Preliminary Design options are presented in the later part of this Study and include an associated Preliminary Budget Estimates for each design option. This design exercise highlighted several key comparative feature of each option. The following is a list of the more significant features.

- The preferred, optimal option new Senior Center of this proposed size facility is best designed as a single-story, on-grade accessible structure. This design option eliminates necessary stairs, elevators, ramps and associated costs, and improves the overall access and functionality of a new Center.
- To accommodate a possible new Senior Center Facility and to avoid the disruption and expense of replicating the existing Senior Center uses, programs and parking away from a construction zone, the optimal location of a new Senior Center would therefore avoid impacting the use of the existing Senior Center Building and parking areas. To achieve this appreciable savings the adjacent Emergency Services owned parcel may be made available for Senior Center use with some possible restrictions. Siting of a new Senior Center on this adjacent land appears feasible and would provide significant savings if the existing Senior Center Programs are not disturbed or require relocation.
- Due to the inherent lower efficiency of designing new Program space within retrofitted existing space and the addition stairs and elevator required in a multi-level addition and renovation of the existing Senior Center the total area of this renovation/ addition option is approximately 1,020 S.F. or 7.5% larger than a single story building design to suit the specific Senior Center Space Needs.
- The impact of the existing Senior Center awkward and difficult to access floor levels creates a less than optimal 3-level similar Center that challenges easy Senior accessibility.
- Additional costs associated with existing and necessary building repairs and improvements diminishes the general cost savings associated with renovation versus new construction costs. Similarly the inherent inefficiency of renovation area versus new construction area will require additional renovation area to provide similarly functional areas as new construction thereby diminishing renovations nominal cost advantage.
- New construction would provide an advantage in longer life cycle costs based on new materials and systems as compared to the remaining existing materials and systems in a renovation project.

Based on the foregoing comparative features the anticipated concept project costs, as demonstrated in the later attached Project Budget Statements, indicates that the probable cost of a newly constructed Senior Center should be less than 5% more than the cost of a similar renovation and addition to the existing Senior Center. Therefore it is the opinion of this Report that the maximum value, greatest efficiency, and optimal function and accessibility are achieved in the Preliminary Design option to construct a new Senior Center nearest the existing Senior Center.

APPENDIX

A. REQUEST FOR PROPOSALS

**Feasibility, Schematic Plans, Site Assessment and Cost Estimates
Senior Center, Town of Groton**

Request for Proposals

Feasibility, Schematic Plans, Site Analysis and Cost Estimates

Senior Center

Town of Groton, Massachusetts



Proposals Due: **March 4, 2016 at 10:00 a.m.**

Deliver Complete Proposals To:

Mark W. Haddad, Town Manager
Town of Groton
173 Main Street
Groton, MA 01450
978-448-1111

mhaddad@townofgroton.org

The Town of Groton reserves the right to reject any or all proposals.

Request for Proposals

Feasibility, Schematic Plans, Site Analysis and Cost Estimates

Senior Center

Town of Groton, Massachusetts

A. Introduction

The Town of Groton requests proposals from registered professional architectural firms. The selected architectural firm will be expected to provide advice and assist the Town in planning a Senior Center, either on existing Town owned land, or on land to be acquired by the Town of Groton at a future Town Meeting.

The architectural firm will:

- a) Evaluate the program and space needs of the Senior Center, both present and planned,
- b) Assess the benefits and challenges of relocating some or all programs and services to one or more existing Town and/or private facilities, including the Prescott School and/or Groton Country Club
- c) Identify key limitations, deficiencies, and advantages in the existing facilities and its overall site.
- d) Assess the feasibility and costs of remediation,
- e) Assess the benefits, challenges, and/or downsides of co-locating to another site or facility,
- f) Provide and assessment of the benefits and challenges of other identified sites for a new facility,
- g) Prepare cost analysis and benefits of renovating/upgrading the existing facility,
- h) Prepare cost analysis for new building, including land acquisition, if applicable,
- i) Prepare a comparative analysis of the benefits of moving/building a new Center vs. upgrading/renovating the exiting Center,
- j) Develop preliminary design drawings of the top 2 preferred recommended plans,
- k) Provide a cost estimate for the top 2 preferred recommended plans and projected project completion timeline for each,
- l) Present findings to various stakeholders.

At present the Groton Council on Aging occupies a Senior Center, located at 163 West Main Street. The Building is approximately 5,100 square feet. This existing Center, as currently constructed, has been determined to be totally insufficient to meet the needs of the Town's growing senior population.

B. Scope of Work

Space Needs

The Architect will prepare a report and shall furnish architectural and structural engineering services as required in order to determine the complete space needs and appropriate adjacencies for either renovating the existing building, or constructing a new Senior Center. The study will describe to the Town what are the sufficient and functionally suitable office space, kitchen space, programming space, meeting space, storage and will include storage needs and will include parking areas and site layout, public parking, staff parking, and necessary traffic needs.

Site Plans

The Architect will survey the current site and any proposed site to determine property lines. The Architect will prepare preliminary site plans to show location of the new building, all parking and internal traffic circulation. The Architect will delineate the wetlands on the proposed site.

Site Utilities Plans

The Architect will investigate and show the location of all utilities including wastewater and drainage facilities and all other utility services.

Schematics

The Architect will prepare schematic drawings showing the space allocations and relationships for a new Senior Center to include: offices, public areas, meeting space, kitchen space, meeting rooms and public facilities. The schematic drawings will also show space needs and allocations of this space for a Senior Center including all facilities normally associated with a Senior Center facility such as: administrative offices, public areas, etc.

The Architect will also provide a conceptual sketch of the front elevation (street side setting) and publicly viewed portions of the building. The conceptual sketches and schematics are expected to be used to inform the public and Town Meeting about the project and should therefore be suitably prepared for this purpose.

Professional Cost Estimate

The Architect will prepare complete cost estimates for the total project. Costs shall be broken down into sufficient detail to allow the town to consider expansion or contraction of the scope of the project prior to commissioning any construction bid documents. Estimates should include all costs: design, preparation of bid documents, labor, materials, engineering, inspection, and contingencies.

Meetings and Deliverables

Meetings

The Architect will be expected to attend an initial scoping meeting with Town officials and working meetings, as needed, with Town staff and the Council on Aging's Feasibility Oversight Committee as well as public hearings. At least two (2) evening meetings will be required to present the report to the Board of Selectmen and general public.

Deliverables

Ten (10) copies of a preliminary written report, including all drafts of the items required to be in the final report are to be submitted to the Town Manager by **August 31, 2016**.

Ten (10) copies of the final written report, including schematics and cost estimates, are to be submitted by **August 31, 2016**.

(Note: In addition to the printed report the final report and other graphic items are to be provided to the Town in electronic format and the Architect is to allow the Town of Groton ownership of the documents for its future use.)

Schedule

The Architect shall submit a schedule for performance of the services to be provided in sufficient detail to demonstrate intent and ability to comply with the dates given for the deliverables.

*****Final Project*****

Should the Groton Town Meeting approve moving forward with the construction of a new Senior Center, the Architect hired for this phase of the project may be used by the Town for the final design and construction of the new Senior Center.

C. Qualifications of the Architect

Ten Copies (10) copies of the proposal must be furnished to Mark W. Haddad – Town Manager for review by the Feasibility Oversight Committee. The proposal must include:

1. The full identity of the individual, partnership or corporation applying for contract award. If the applicant is a partnership or joint venture, the proposal should specify who will act as the lead Architect for purposes of assuming contractual responsibility. If the Architect intends to sub-contract any other work required in the scope of services, the sub-consultant must be identified.

2. A description of the Architect's approach to this project: methodology, demonstrated understanding of the community's needs, and the Architect's expectations and need for assistance and services from the Town.
3. A client reference list, with names, addresses, email addresses and telephone numbers, especially for clients for whom the Architect has performed similar services in the past.
4. Any other information deemed relevant to the project, and which the Architect believes will further the competitiveness of the proposal, including work samples from similar completed projects.
5. Certifications: Non-Collusion Certificate and Massachusetts State Tax Payment Certificate must be submitted with the Proposal.

E. Selection Criteria

Proposals will be reviewed by the Feasibility Oversight Committee designated by the Council on Aging. The Committee will evaluate each submission by applying the ratings "highly advantageous", "advantageous" or "not acceptable" to the criteria listed below to evaluate and rank the Architects. A composite rating will be assigned to each applicant based upon the ratings received in each category. Any applicant receiving a "not acceptable" in any category will be eliminated from the review process. All required information required in this RFP will be utilized in order to evaluate each proposal. Interviews and presentations will be offered to the firms submitting the more qualified proposals. Following evaluation of the technical proposals cost proposals will be opened and reviewed.

Technical Proposals Review Criteria:

- A. Approach to the project and demonstrated understanding of the purpose and needs of the Town in this project.
- B. Architects and team members' background, experience and demonstrated ability and reputation in projects of similar type and scope. References will be contacted.
- C. Ability of the Architect to meet the Town's time schedule.
- D. Prior similar projects by Architect and/or team members.
- E. Evidence that the firm has the necessary licenses required for this project.

Architect Selection

A recommendation will be made by the Feasibility Oversight Committee to the Town Manager, who will select the Architect best meeting the RFP criteria at the most attractive cost resulting in the most overall advantageous proposal to the Town. The Town expects the selection will be made within thirty days following the date proposals are required. Contract award is subject to approval by the Groton Spring Town Meeting, currently scheduled for April 25, 2016.

Contract Form

The Town will use the DCAM Contract for Designer Services standard contract form modified to reflect services described in this Request for Proposals.

F. Submission of Proposal

Written technical proposals, including Project Fee Proposal (Attachment A), Certificate of Non-collusion and State Tax Payment Form must be packaged and clearly marked:

“Feasibility, Schematic Plans, Site Analysis and Cost Estimates for a Senior Center Town of Groton, Massachusetts”.

Proposals should be addressed to:
Mark W. Haddad, Town Manager
Town of Groton
173 Main Street
Groton, MA 01450

The final date for submission of proposals is 10:00 a.m. on March 4, 2016.

Sealed written proposals must be separately packaged and clearly marked:

**"Senior Center - Technical Proposal" and
"Senior Center - Cost Proposal"**

Technical Proposal

The Technical Proposal shall include:

1. A completed **Application to Designer Selection Committee** form available from the Massachusetts Division of Capital Asset Management (DCAM).
2. A description of the approach to be taken by the Architect to perform the scope of services.
3. Credentials and experience of project team in similar work, specifically Senior Centers.

4. Descriptions of five similar projects completed by the Architect or project's team members in last ten years and contact references.
5. Project schedule.
6. Demonstration that the team will have sufficient time to complete the project given other commitments by the Architect.
7. Certifications: Certificate of Authority, Non-Collusion Certificate, Mass. State Tax Payment Certificate and Certificate of Non-Discrimination.
8. Cost Proposal is to be provide in a separate, sealed envelope and marked "Cost Proposal" (see below)

Cost Proposal

Architects must submit a Project Fee Proposal (see Attachment A) with the proposal but is to be submitted in a **separate** sealed envelope.

FAXED Copies not acceptable